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COLLECTIVE ACTION BY ENGINEERS

by

THOMAS ROSS VANT

A THESIS

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The undersigned certify that they have read,
and recommend to the Faculty of Graduate Studies for
acceptance, a thesis entitled Collective Action by Engineers
submitted by Thomas Ross Vant in partial fulfilment of the
requirements for the degree of Master of Business Administration.

ABSTRACT

This study is concerned with: (1) the problems associated with programs of collective action by engineers, and (2) the advantages and disadvantages of alternative programs available to them.

The problems arising from engineers' interests in collective action have been created by the rapid rationalization of the engineering function during the last thirty years. Engineering tasks have been specialized, engineers have lost intimate contact with management, they have been forced to work together in large rooms, their talents have not been fully utilized, and there has been a corresponding loss in creativity. In short, rationalization has considerably changed the working relationships of professional engineers. Further, this change has meant that individual bargaining, which was appropriate in the past, is no longer an effective method of wage determination for the bulk of the engineering profession.

In order to regain control over wages, hours, and working conditions engineers have advocated some form of collective action to fulfill their needs. When choosing the particular kind of collective action, the engineer is placed in a real dilemma. He would appear to have four organizational alternatives to choose from: (1) membership control by the Association, (2) collective bargaining under the Labour Act, (3) collective bargaining

under a Special Act, (4) revision of the existing Professional Act. However, none of these fully satisfy his needs. These needs, and there would appear to be five of them (legal, effectiveness, unity, status, and dignity), can be viewed as the prerequisites to a system of collective action for the engineering profession.

The paper analyzes the available alternatives, and judges the degree to which each satisfies the five prerequisites. The study concludes that: (1) in order to deal with the problems that rationalization has created for engineers they will be forced to embrace some form of collective action, and (2) considering the five prerequisites, collective action formulated under a special statute appears to best satisfy the needs and concerns of the profession.

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COLLECTIVE ACTION BY ENGINEERS

INTRODUCTION

A DILEMMA

This paper is primarily a study of the dilemma that professional engineers are currently facing, in having to choose between the available organization alternatives. There would appear to be five prerequisites that a new system of wage determination would have to satisfy--legality (the desire to be given certain rights under the law), effectiveness (the necessity of the new system being successful), unity (the need for all members of the profession to participate in the new system), status (the need to be recognized by the public, and other professionals, as a professional), and dignity (the need to be accorded the treatment that is accorded other professionals).

In this paper we will be looking at each of four alternatives to try and assess the extent to which each satisfies the five prerequisites. This has been done by looking at the advantages and disadvantages of each alternative, and in some instances registering the attitudes of engineers to a particular approach. In studying the problems that each alternative presents books, legislation, documents, periodicals, and original material have been analyzed.

It would be wise at the outset to arrive at some useful meaning for the term "collective bargaining". The process of collective bargaining has been discussed by Edwin Beal and Edward Wickersham in The Practice of Collective Bargaining.

Collective bargaining is not a profession but a process. It has its own professionals in the sense that certain people--labor leaders, industrial relations directors, government officials of various sorts--work at it full time and spend the whole of their careers in it; but each of these persons practices a different function, and most of the people who take part in the process are not professionals at all. They are involved in it because the way they make their living brings them into a collective bargaining relationship.

That relationship takes place under conditions that are fairly specific. It is when people work for salary or wages, under management, and when management deals with a union or unions speaking as the representative of the employees. This happens usually (but not always) in private enterprises producing goods or services for sale with the aim of making a profit.

Collective bargaining thus occurs in a social setting; it is a social process. Its activities involve the representation of different groups and interests. It results in decisions, and rules of conduct, that affect the behaviour of these groups (and individuals in these groups) toward each other. Directly or indirectly, all the groups and individuals are part of the process: manager (from corporation president down to foreman) and workers, whether they be members of the union in the enterprise, or not. With the exception of the few paid full-time representatives, all these others make their living from the enterprise that employs them, not from collective bargaining; but collective bargaining defines the roles they play toward each other, and their respective shares in the fruit of their common enterprise activity.

It is easy to see how this differs from the practice of a specific profession, even though there are professionals in the collective bargaining field. It is more nearly analogous to government, another social process. Government has its

professional politicians and lifelong officials, but involves every citizen as well.

Like government, collective bargaining consists of formal relationships between people organized in groups. The formal structure rises out of a matrix of other relationships, formal and informal, and of interests which must be reconciled. While collective bargaining has its informal aspects--and these are by no means unimportant--it is fundamentally a formal and fairly systematic process. In it, managers and employees work out arrangements and accommodations of their various, sometimes conflicting, interests. Collective bargaining may be thought of, then, as having something of the nature of the process and practice of government--representative government--in the enterprise.¹

The above description gives us a very good idea of the nature of collective bargaining. However, the informal aspects of the collective bargaining process should not be under-rated. As the following legal interpretation suggests there is no attempt to ensure that the system will be a rational one.

... "bargain collectively" means to negotiate in good faith with a view to the conclusion of a collective agreement, or of the revision or renewal of an existing collective agreement, and "collective bargaining" has a similar meaning.²

With reference to the above passage the term "collective agreement" means:

¹Beal, Edwin F. and Wickersham, Edward D. The Practice of Collective Bargaining. Homewood, Illinois: Richard D. Irwin, Inc. Revised Edition. 1963, 772 pp.

²Alberta Department of Labour. The Alberta Labour Act. Queen's Printer: Edmonton, Alberta. 1964, 84 pp. sec. 55 (1) (a).

... an agreement in writing (i) between an employer or an employers' organization acting on behalf of an employer on the one hand, and a bargaining agent of his employees on behalf of the employees on the other hand, and (ii) containing provisions with reference to rates of pay, hours of work, or other terms or conditions of employment of the employees and signed by the parties thereto.³

Thus, we can see that under a system of collective bargaining each employee has a separate contract with the employer, but work is viewed as a social phenomenon. As a result employees form groups to negotiate wages, hours, and conditions of work with the purpose of attaining improvements in their conditions of work and greater security in their job. Thus collective bargaining is one means of attaining these desired ends.

Collective bargaining, as practiced on the North American Continent, is a unique system. While it is true that the stimulus for the establishment of the system came from European craftsmen who immigrated to this continent, the system that has evolved does not clearly resemble any other system in the world today. This has not been the result of careful long-range planning, rather, it has been the result of much experimentation by employers, unionists, and government. Thus, a system has developed that meets the unique needs of these parties in Canada and the United States.

³Ibid., sec. 55 (1) (c).

The reason for the emergence of collective bargaining can best be seen by briefly reviewing the development and decay of productive systems (as we have said that collective bargaining is a reflection of the needs of the parties that are involved in the productive system). The break-down of social systems results from many causes--both internal and external. Role⁴ conflicts may lead to disruption, or the inability of individuals to meet the demands of their roles may cause decay. There may be some basic fault in the organizational structure, due to a failure to keep up with advancing technology or some other change. The organization may also break-down because of an inability to cope with its environment, i.e. it may not be able to adjust to the needs of external organizations, or restrictions placed on them by competitors, government, or unions.

Over the years many productive systems have developed and decayed, but they have all contributed to the type of productive system that flourishes today, and thus, to the emergence of collective bargaining. Starting from the slave system we have moved through the guild system, the putting-out system, the factory system, industrialism, and bureaucracy or rationalization. Each of the earlier systems have broken-down because of the failure to meet

⁴"Role" is the part an individual plays as a result of occupying some position or status in life. The role has a life, a sort of existence, apart from the personalities who fill it at any given time.

one or more of the prerequisites, i.e.: individuals must be motivated, order must be maintained, communication between the individual members must be adequate, communication must bear the stamp of authority and legitimate decision, unity of purpose must be established, there must be protection from external forces, and a solvent and efficient system of production must be maintained.

The first system of importance to our discussion, the guild system, can be characterized by the practices that were followed in an attempt to maintain the guild's economic position in society. Production techniques, prices, raw materials, sales by outsiders, and quality at the master level were all strictly regulated. The technology was basically handicraft with "apprentices", "journeymen", and "masters" dividing the labour on the basis of total product. It was understood that all work was to take the longest possible course. As well, relationships were governed by a rigid social structure and by sharply defined values which guaranteed certain rights to all and exacted certain duties from all.

The guild system declined for several reasons. With wealth accumulating in the hands of certain masters it became increasingly difficult to become a master, as a result some craft guilds were transformed into merchant guilds. As markets gradually widened and trade increased there developed a strong demand for new products, and guilds became dependent on exporting merchants. Also, the monopoly in many areas of manufacturing led to the

hostility of other groups. Thus, the guild workers, through a combination of external social, political, and economic factors, as well as through internal weaknesses, became employees of merchant entrepreneurs.

The merchant-capitalist gradually extended his power over the guilds, and the putting-out system evolved. Under this system the merchant, whether or not he owned the means of production, always supplied the raw material and owned the finished product. Thus, the worker became a wage earner.

An extension of this system resulted in the factory system. For the first time all the workers were brought under one roof, with the means of production completely in the hands of the entrepreneur. It was during this period that workers were centralized with communities being established around factories, and conditions thus being created for the use of machinery and mechanical power. It was also during this period that the maximization of profit became an end in itself, rather than a means to an end. The entrepreneur --who had invested capital in tools, plant, raw material, and labour--was no longer required to work along side the employees, but rather, he became a capitalist.

The factory system came into being for many reasons. Increased markets had developed purchasing power among certain groups, and a money economy came into being. Centralization made possible rigid discipline over the system of production, where the quantity, quality, and uniformity of work

could be guaranteed. Workers could be forced into complete economic dependence, and tasks could be divided for increased efficiency, productivity, and profit. Central sources of power could be used, and production could be a planned process.

Along with the above, there were several external influences that led to the establishment of the factory system. While large amounts of capital were becoming available for investment (largely from new discoveries), the guild system had been decaying internally and losing power externally. The political conditions were favourable, and labour became more mobile with the destruction of the old social relationships under feudalism. Also, Protestantism created a rational climate. The new system was largely the outcome of a rational view of life. The system was based on rational techniques of production, accounting, budgeting, and rules of operation.

"Under the factory system employer-employee action was oriented to advantage in exchange on the basis of self-interest."⁵ The amount of labour available and the needs of the entrepreneur jointly determined the level of wages. The responsibility of the entrepreneur to the employee ended once the wages were paid. The entrepreneur had extreme power over the worker because he owned the means of production, was free from immediate economic need, had no

⁵Weber, Max. The Theory of Social and Economic Organization, translated by A. M. Henderson and Talcott Parsons. New York: Oxford University Press. 1947, pp. 212-213.

personal ties with the worker, and was able to keep the workers too poor to retaliate. "'Freed' of rights to support in times of slack work, forced to find work in a market in which labour was usually plentiful and unorganized while employers were few and cohesive, cut-off from the ownership of the tools of production, and therefore dependent on a job for existence, the worker was rarely a match for the employer."⁶

The rationalization of production largely resulted in the division of labour, and mechanization. Production became a continuous process, with labour divided into minute tasks, enabling workers to become quickly proficient at new jobs. Labour could be divided so that separate tasks could be performed not only independently, but simultaneously, successively, or in a coordinated system of production. Coordination of tasks became essential to the solidarity of the large-scale enterprise.⁷ Specialization tended to standardize, routinize, automate, and simplify the work process. It helped create specific roles, and the ways in which these roles were related.

With specialization the technological problems of converting handicraft into machine production were simplified. For the worker the machine

⁶Schneider, Eugene V. Industrial Sociology. New York: McGraw-Hill Book Company, Inc. 1957, 559 pp., p. 44.

⁷Durkheim, Emile. The Division of Labour in Society, translated by George Simpson. Glencoe, Illinois: Free Press. 1947.

caused a profound sense of insecurity. It caused new formal and informal relationships to form, and brought a sense of meaninglessness to work. Man tended, fed, operated, or ran the machine, but the machine did the work. However, for the entrepreneur the machine meant increasing freedom from restrictions on production. The machine raised output levels, often improved the durability and quality of goods, and cut costs by displacing labour, replacing skilled with unskilled labour, and (initially) by lengthening the workday.

Rationalization, or bureaucracy, came into being because it met certain requirements of this new large-scale production. As the size of industrial units increased the task of administration became greatly complicated. There were new demands for trained experts, centralized planning and control, efficient communication, discipline, and complicated systems of record keeping.

The development of rationalized organizations has been hastened by the development of mechanized technology. The new requirements for coordination demand not only careful and rational planning, but also a rigorous system of discipline. Both of these can best be attained under a bureaucratic form of organization. Bureaucracy is a means of creating and maintaining a continuous and rigid discipline over personnel at all levels. Both employee and manager are economically dependent on the bureaucracy, the quantity and quality of work can be determined and rewarded or punished, and the rigid lines of authority mean that responsibility for performance of a task can be

definitely located.

Thus, with new systems of production emerging the relationships of the various members of the productive process have gradually changed. The guild system included all the members of a particular craft. "Employers" and "employees" shared common views and saw that it was to their advantage to band together, as members of a common trade, as protection against external groups. However, as we saw previously, the internal relationships of the members changed as the masters began to control the means of production. It became necessary for employers to be excluded from the main body of workers, for the situation had changed from one where all the members of a particular vocation were banded together to thwart off external pressures and groups (government pressure and competitors), to one where the employers in a particular vocation and the employees in the same vocation were struggling against each other. This change in emphasis, from an external to an internal struggle, was made necessary when the apprentice and journeyman became true employees or wage earners. Without control of the means of production they had no recourse but to attempt to exact better wages and working conditions from their employers. As the interests of the parties were no longer the same, it could no longer be assumed that wages and conditions of work would be improved as profits improved.

The result of this changing relationship was a strict delineation between management and workers. The logical sequence to this was a movement of employees, which became known as the union movement. Originally the

employees who took part in this movement were highly skilled craftsmen.

However, as the movement progressed it was expanded to include semi-skilled workers and common labourers. Thus, anyone closely allied with management --in either a supervisory or a confidential manner--was excluded from the unit of employees⁸ that sought bargaining privileges through certification.⁹

It was during this period of time that professional and related employees were excluded from the bargaining unit. While they were employees if judged by their administrative relationships, they were responsible for advising management about problems in their field. As advisors they had confidential relationships with management, and as a result, it was seen to be impossible for professionals to join a group that was in a power struggle with management.

Exclusion from the bargaining unit was not viewed as a problem by the professional employee. He considered himself a bona-fide member of management, and therefore, any bargaining that affected him should be done on a personal basis. The professional considered himself an individualist, and

⁸A "unit of employees" or "bargaining unit" is any group of employees in a plant, company, or industry that are regarded as appropriate for the purpose of collective bargaining, and therefore, may be duly certified.

⁹"Certification" is the recognition by a Labour Relations Board of a union as the exclusive bargaining agent of a unit of employees.

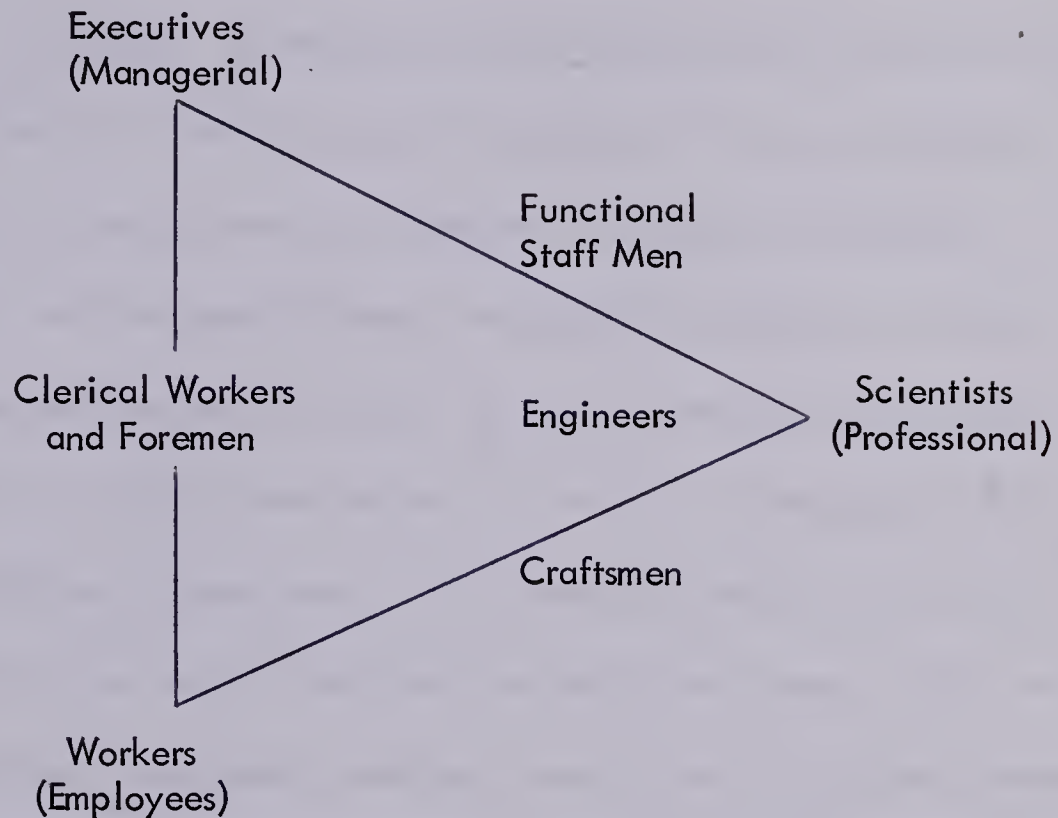
was completely opposed to any group efforts to bargain with management on his behalf.

The opposition was not to the ends, but rather, to the means. The original professions were always interested in having control over the wages of their members--even if this was seen as a form of public protection. Lawyers and doctors have long made use of fee schedules, but at the same time have been opposed to any form of collective bargaining on their behalf. Thus, while the end result may be the same for both methods of wage determination (fee scheduling and collective bargaining), one method is accepted and the other rejected.

The same feelings are not evidenced in all professions today. There are many professional groups participating in collective bargaining at present. Teachers, nurses, doctors, civil servants, professors, and engineers are all either participating as a group or have groups within their profession that participate. The last group, the engineers, are the ones we are most concerned with in this paper. They are also the most interesting group--largely due to the diversity of engineering occupations.

George Strauss has illustrated the diversity of engineering occupations, and the overlapping of functions that results in a less-than-pure

occupational grouping for engineers.¹⁰



As this diagram aptly illustrates, Strauss sees the engineers as belonging to one of the least pure occupations. Depending on the work they are doing and where they are employed, engineers may be viewed as employees, management, professionals, or a mixture of all three orientations. This is one of the basic reasons for the dilemma involving wage determination that is facing

¹⁰ Strauss, George. "Professionalism and Occupational Associations". Industrial Relations. May 1963. p. 11.

engineers today. Because of this occupational diversity there is no common value system that can be shared by all engineers.

However, all engineers have a common bond (however weak) through membership in their professional association. But members of the profession can be broken-down into three types of engineer: engineer-entrepreneurs, engineer-administrators, and engineer-employees. It is the last group that provide the difficulties. While they retain their professional feelings, they have slowly taken on the characteristics of employees. They are given highly specialized tasks, and are losing all personal contact with top management. As a result, individual bargaining has become ineffective and these engineers are currently seeking a means of revitalizing their process of wage determination. Some feel that the promotion of collective bargaining is the best solution. However, there are many alternative ways of providing collective strength. As a result, the problem to be studied in this paper is: "Of the alternatives available for promoting collective action, which will be the most satisfactory from the various points of view?" The dilemma that this question presents is a direct result of the changing relationships of engineers. In attempting to answer some of the questions that this dilemma involves, we will have to decide which alternative will best satisfy the needs of the profession for unity and dignity, the needs of the individual engineer for status, the economic needs, and the legal needs. These needs can be viewed as the five prerequisites

to an acceptable system of wage determination in the engineering profession.

THE CHANGING RELATIONSHIPS OF THE ENGINEER

During the early and middle 1700's the engineering profession came into being. Members of the profession came from varied backgrounds, but the original group was largely composed of millwrights. The following passages illustrate the emergence of the profession of engineering.

... the millwrights were as yet the only engineers. In the course of their trade they worked at the foot-lathe, the carpenter's bench, and the anvil by turns ... Necessity made them dexterous, expert, and skilful in mechanical arrangements, more particularly those connected with mill-work, steam engines, pumps, cranes and such-like. Hence millwrights in these early days were looked upon as a very important class of workmen ... On occasions of difficulty the millwright was invariably resorted to for help; and as the demand for mechanical skill arose, in the course of the progress of manufacturing and agricultural industry, the men trained in millwright's shops ... were borne up by the force of their practical skill and constructive genius into the highest rank of skilled and scientific engineering.¹¹

Between 1740 and 1760 we find him (James Hargreaves) settled in the neighbourhood of Blackburne in Lancashire where he combined the trades of weaver and carpenter. It was no doubt in his capacity as carpenter that he came to deal with machinery. At that time, when there were no professional engineers, their place was more or less filled by carpenters,

¹¹Smiles, S. Lives of the Engineers. London, 1861. Vol. I, p. 312.

locksmiths, or clockmakers, in fact by anyone who was sufficiently used to working in wood or in metal and could set up wheel work or fit parts of machinery together. Among these emergency engineers a special place must be given to the millwrights whose help was essential to the setting up of the first factories.¹²

As a result of the common problems and working relationships with which these men found themselves confronted the Society of Civil Engineers came to birth in the form of a dining club. As one of the members said, "... it would be well, if some sort of occasional meeting, in a friendly way, was to be held ... that thus the sharp edges of their minds might be rubbed off, as it were, by a closer communication of ideas, no ways naturally hostile; might promote the true end of public business upon which they should happen to meet in the course of their employment."¹³ The Society has continued to the present, with only one minor interruption in 1792.

The Society, however, was rather informal and there became a real need for a more formal type of association. As a result, the Institute of Civil Engineers was inaugurated in 1818 and in 1828 a charter was obtained from the King of England. The Institute has served largely as a study association,

¹²Mantoux, P. The Industrial Revolution in the Eighteenth Century, London, 1928. p. 221.

¹³Reports of the Late John Smeaton. London, 1912. Vol. I, pp. ii to vii.

with regular reporting of findings. In the following decades engineering departments were founded in many universities, but it was some time before academic training was thought to be desirable. In 1884 one member of the institute reported that, "it is looked upon as a great thing to be a member of the Institution of Civil Engineers, but unfortunately membership does not imply scientific training ... There are plenty of members of the Institution of Civil Engineers who have hardly any scientific knowledge at all ... An apprentice at my works, without the smallest scientific training, can become a student at the Institution of Civil Engineers, then he can become an associate, and by and by a full member, having had all the time no scientific training at all."¹⁴ However, shortly after the Institute was established a hierarchy developed within the association, made possible by a system of rules and examinations. Thus, with a newly acquired interest in the qualifications of its members, the Institute was established as a truly professional organization.

While many specialized organizations (with a resulting overlapping of membership) have been formed, the Institute of Civil Engineers remains the main examining and policy setting organization. In this latter respect, as early as 1920 interest in the matter of salaries was apparent.

¹⁴Second Report of the Royal Commission on Technical Instruction.
London, 1884. Vol. III, p. 177.

The Council are aware that in some services the matter of salary is being taken up by organizations formed for the purpose of improving the conditions of employment of salaried officials, and many members have invited the Council's views as to the propriety of their joining such bodies. The Council would naturally prefer that the status and position of a civil engineer should make it unnecessary for him to join any union; but as things are they have to say that the Institution cannot take exception to its members acting in that way to protect their interests, provided the bodies to which they may attach themselves are composed of men of professional and administrative status similar to their own.¹⁵

At this time the bulk of engineers could still be classed as engineer-entrepreneurs, with administrative oriented engineers becoming more important. Thus, the dilemma that was being faced was really that of individual bargaining or fee scheduling. However, as more and more engineers could be characterized as employees the dilemma changed from one of individual bargaining versus fee scheduling to one of individual bargaining versus group salary negotiation. The historical relationship had changed drastically, making this shift in emphasis inevitable. The vast majority of engineers today draw a salary. Only a small minority actually set a fee and practice the profession in a way that fits the independent entrepreneur image.

¹⁵Report of the Council. Minutes of Proceedings of the Institution of Civil Engineers. Vol. CCX, 1919-1920, Part II, p. 299.

In Canada, in 1960, 91.0 per cent of the engineers were employed on a salary basis and 7.6 per cent were self-employed. The remaining 1.4 per cent were either employed on a part-time basis or were unemployed.¹⁶ Thirty-four per cent of the total were in pure manufacturing¹⁷, and 75 per cent of the total were employed in Quebec and Ontario¹⁸.

The reason for this change in the working relationships of engineers was predominantly the mushrooming of engineering activity that took place during the Second World War. It was found that the engineering work that had to be done could be subdivided into specialized tasks. Because of this new rationalization (which engineers were largely responsible for) engineering departments grew to enormous size, often with hundreds of engineers working together. As a result management and supervision became rationalized, and formal procedures, techniques and controls came into use. Thus, the tools that engineers had developed for shop and manual workers were now being applied to their situation. Many engineers came to despise the time clock that had formerly been their ally.

¹⁶Economics and Research Branch, Department of Labour, Canada. Engineering and Scientific Manpower Resources in Canada. Ottawa, Canada: Queen's Printer. Bulletin No. 10. June 1961, 63 pp., p. 16.

¹⁷Ibid., p. 17.

¹⁸Ibid., p. 21.

The new rationalized system had many secondary repercussions.

The engineer's work became fragmented, he lost many of the unwritten privileges that he had formerly enjoyed, the wage differential between shop employees and engineers began to narrow, the fear of unemployment led to uncertainty, individual treatment was dwindling, and many thought that their broader training and abilities were not being properly utilized. As a consequence there was a deep feeling of anxiety and uncertainty in the minds of most engineers. This, quite naturally, led them to seek the protection of some sort of an organization, or at least, to be responsive to pleas in support of collective bargaining.

The underlying causes of dissatisfaction among engineers, that were believed to be responsible for their interest in collective bargaining, were the cause of much controversy in the last decade. The Engineers Joint Council published a list of the reasons for dissatisfaction that they felt were pertinent in 1956.

Professional Treatment:

1. A feeling among engineers that they were not identified with management.
2. Inadequate channels of communication between top management and nonsupervisory engineers.
3. Inadequate recognition of the engineer as a professional employee.
4. Assignment of engineers to subprofessional work.

5. Undue retention of engineers in specialized and narrowly compartmentalized assignments.
6. Lack of appropriate means for resolving individual problems.

Personal Treatment:

1. Inadequate recognition and treatment of the engineer as an individual.
2. Lack of broad classifications and appropriate titles by which the engineer could measure his progress.
3. Inadequate or nonexistent plans for training and job rotation.
4. Inadequate understanding of promotional policies and promotions were not commensurate with ability and performance.
5. A feeling of insecurity of employment.
6. Management human relations knowledge and skills have not kept pace with the expanded utilization of engineers.

Financial Treatment:

1. Engineering salaries not commensurate with fundamental contribution.
2. Too small a differential between the pay of engineers and members of the skilled trades.
3. Salaries of experienced engineers not sufficiently increased, in comparison with present starting salaries.
4. Wide variation in salaries paid to engineers doing comparable work in different organizations.

5. Dissatisfaction with merit review systems and inadequate understanding of salary administration.¹⁹

The above mentioned problems were general in North America, but the approach to collective bargaining was different in Canada than it was in the United States. In the United States the National Labor Relations Board²⁰ under the Wagner Act, and later under the Taft-Hartley Act, were willing to accept professionals as members of a bargaining unit. However, in Canada the pertinent legislation excluded professionals from any bargaining rights under the labour act because they were not deemed to be employees.

... "employee" means a person employed to do skilled or unskilled manual, clerical or technical work, but does not include

(i) a manager or superintendent, or any other person who, in the opinion of the Board, exercises management functions or is employed in a confidential capacity in matters relating to labour relations,

or

(ii) a member of the medical, dental, architectural, engineering, or legal profession qualified to practice under the laws of a province and employed in that capacity.²¹

¹⁹Raising Professional Standards and Improving Employment Conditions for Engineers. Washington, D. C.: Engineers Joint Council. Report No. 101, 1956, p. 1.

²⁰The "National Labor Relations Board" was created by the National Labor Relations Board Act of 1935 and continued by the Taft-Hartley Act of 1947, with the primary purpose of holding elections to determine union representation, and to interpret and apply the law concerning unfair practices.

²¹Canadian Department of Labour. Industrial Relations and Disputes Investigation Act. Ottawa, Canada: Queen's Printer. 1948, 28 pp., sec. 2 (1) (i).

Thus, while the dilemma in the United States was whether or not to form a bargaining unit under the existing legislation, the dilemma in Canada was whether or not to seek legislation that would allow such a unit to be established.

In the United States, due to the permissiveness of the Wagner Act, many professionals formed units as a defensive measure against being absorbed by an industrial union. Under this legislation professionals could be included in a broader bargaining unit by a majority vote of all potential members of the unit. Thus, through a fear of being unwillingly forced into a broad bargaining unit, many professional engineers formed their own units. Their fears were justified, for during this period the industrial unions were launching a campaign to unionize white-collar workers, and professionals were seen to be the key to success in this campaign. The unions believed that if groups like the professional engineers could be unionized the job of unionizing white-collar workers would be greatly simplified.

However, in 1947 the Taft-Hartley Act eliminated the possibility of engineers becoming engulfed in broader industrial units without an effective voice. The legislation made it necessary for a majority vote of the pertinent professionals to signify that they wished to be represented in the larger unit before they would be included. As a consequence, much of the impetus for unionization of engineers was lost. Unionization now became an offensive action rather than a defensive one.

Thus, engineers in the United States are now approximately in the position that Canadian engineers find themselves. That is, unionization must now be construed as an offensive action. There is, however, still the material difference that engineers in the United States can seek certification under the existing legislation. In Canada engineers are faced with the dilemma of altering existing legislation or promoting new legislation.

CHANGING PERSPECTIVE TOWARD COLLECTIVE BARGAINING

The attitudes of professional engineers towards collective bargaining have been changing, as their work relationships have been changing. There is, however, no firm consensus of opinion about the question of collective bargaining among all engineers. Not only do opinions and methods of tackling the problem vary from province to province, but the members of the profession are split into factions within each provincial group. A brief synopsis of past events will serve to illustrate this, with the examples necessarily taken from the provinces where the greatest response has been manifested.

1944 - 1948

Legislation

Engineers were free to bargain collectively with their employers, but without the protections or restrictions of the Labour Act.

FEPEA Formed

The Federation of Employee-Professional Engineers and Assistants was formed under the guidance of the Association of Professional Engineers of Ontario to deal with matters relating to collective bargaining.

New Legislation

In 1947 ... "Wartime legislative powers were relinquished by the Federal Government, and provincial governments prepared new legislation. During this period the Engineering Institute of Canada and the councils of the various professional associations assumed the responsibility of representing the whole engineering profession to the Government (without, however, gaining the approval of the members of the profession, or even those groups of engineers that had become certified and were practicing collective bargaining within the profession), and succeeded in persuading the governments to exclude the engineering profession from the new legislation. The Federation protested and opposed this action, but it was too late; the legislation had been passed."²²

²²Phillips, E. G., Chairman. Negotiation Rights for Professional Staffs. Steering Committee on Negotiation Rights for Professional Staffs: Toronto. April 1965, 7 pp., p. 5.

1948 - 1953

Amalgamation Sought

While units of the Federation of Employee-Professional Engineers and Assistants continued to bargain with various companies on a voluntary basis, amalgamation was sought between the Federation and the Association of Professional Engineers of Ontario. However, this did not take place, because the Association would not entertain any collective bargaining.

1953 - 1956

Liaison Committee

"In 1953 the Professional Status Committee was incorporated as a standing committee of the Association (Ontario). The Liaison Committee was to be regarded as a sub-committee of the new standing committee for the purpose of maintaining a direct channel of communication between Council and the Federation. In April, 1953, Mr. Herbert Smith introduced the 'Third Way' approach, a system, as explained in the June, 1960, issue of The Professional Engineer, 'lying midway between the two extremes of abandoning the professional engineer to working out this problem for himself on the one hand, and formal collective bargaining procedures on the other'. The liaison talks foundered on the basic difference of outlook during the year. The Federation

reorganized itself into the Canadian Federation of Engineers and Scientists."²³

Company Groups Committee

"During this period a 'Young Engineers Committee', later to be called a 'Company Groups Committee', was formed as a sub-committee of the APEO's Professional Status Committee. Finally, at the end of 1955 the Federation and the APEO Council came to an understanding. As reported in the June, 1960, issue of The Professional Engineer: 'It was made clear that the Federation regarded it as a matter of paramount importance that some means be found to ensure channels of communication on salary matters such as provided under the Labour Act. The solution proposed was a revision of the Act to remove engineers from the exclusion clause, but it was indicated that if assured means of communication could be found by some other organization, the Federation would have no need to continue.' Agreement was reached on the understanding of this principle, and so the Federation disbanded and the Association passed a by-law creating the Employee Members Committee (EMCO) to take its place."²⁴

²³Ibid., p. 5.

²⁴Ibid., p. 5.

1958

Removal of Exclusion Clause Sought

A brief (which the Ontario Council opposed) was presented to the Ontario Legislature's Select Committee on Labour Relations by the Society of Ontario Hydro Professional Engineers and Associates. The brief sought removal of the exclusion clause in the Ontario Labour Relations Act, that would give engineers bargaining rights.

1959

Quebec

A clause which specifically forbade professional engineers from joining a union was included in the Code of Ethics of the Quebec Corporation of Professional Engineers.

1960 - 1962

Internal Discord

Internal discord was apparent within engineers' associations. This is illustrated by conflicting points of view presented by different groups with the Association of Professional Engineers of Ontario.

Council

"(It is resolved) That this Council re-affirms its considered opinion that it is in contradiction to individual professional responsibility and to the professional concept of co-operative effort for

professional engineers to engage in compulsory collective bargaining under the law. Further, that this Council is not prepared therefore, to provide any encouragement or support to movements of its members, seeking to bring about compulsory collective bargaining under law."²⁵

Employee Members Committee

"(It is resolved) That the Employee Members Committee requests the Legislation Committee to consider recommending to the membership additions to the Professional Engineers' Act which would have the following effect:

(a) provide a group of engineers with the right to negotiate and sign agreements with its employer if a majority of the employee engineers voluntarily form an organization for this purpose.

(b) prohibit negotiating groups of engineers from affiliation with a trade union or with an organization which is affiliated with a trade union.

(c) provide that any unresolved differences remaining after due process of negotiation be decided by a board of arbitration.

²⁵Ibid., p. 6.

(d) protect the free choice of an individual engineer to join or not to join a negotiating group."²⁶

United States

In 1962, in the United States, the National Society of Professional Engineers encouraged its members to participate in the new "Government Employee-Management Co-operative Program". They recommended that state chapters assist engineers to organize and receive formal recognition. In this program professionals were allowed to remain as separate units, and the right to strike was not granted.

1963

Legislation Requested

The Society of Ontario Hydro Professional Engineers and Assistants presented a submission to the Ontario Legislature requesting new legislation for engineers and scientists.

Quebec Revision

"The Province of Quebec Labour Code was revised and the clause which formerly excluded professional engineers was removed. This means that groups of engineers may apply for and receive certification to participate in collective bargaining under law. Professionals

²⁶ibid., p. 6.

are now able to organize under the Professional Syndicate Act without the right to strike or under the Labour Code with the right to strike. Three engineers' groups have to date, organized under the Professional Syndicate Act. One of these groups when agreement could not be reached with management took the action of conducting simultaneous 'study sessions' during the course of their negotiations."²⁷

1964

Ontario

Conferences and committees were conducted by the Employee Members Committee of the Ontario Association in an effort to promote collective bargaining. The Steering Committee on Negotiation Rights for Professional Staffs was formed. Engineer groups in twelve Ontario companies (with no support from the Council) prepared a brief requesting a "Professional Negotiation Act".

British Columbia

The Association of Professional Engineers of British Columbia encouraged the formation of "Employee Groups" to represent groups of employee-engineers in large firms. The president of the association

²⁷Armstrong, W. M. "Changing Attitudes". The B. C. Professional Engineer. December 1965, p. 16.

met with top management in these firms and sought their support in establishing these groups.

Quebec

The clause in the Code of Ethics of the Quebec Corporation of Professional Engineers, which forbade engineers to join unions, was removed.

1965

New Act: Exemption Sought

"A new act, Bill C-126 Canada Labour (Standards) Code which is part of the Federal Labour Legislation, was enacted to establish hours of work, minimum wages, vacations, etc. This code does not exclude members of the professions. The Canadian Council of Professional Engineers was in communication with the Department of Labour and was told very clearly that any attempt by professional groups to obtain exclusion from this code would be opposed. However, C.C.P.E. did submit a brief requesting exclusion of Professional Engineers and subsequently regulations were developed which contained a clause which excluded professionals who were qualified to practice under the laws of their province."²⁸

²⁸Ibid., p. 17.

Exemption from Proposed Legislation

"Canadian Council of Professional Engineers submitted a brief to the Federal Government asking that engineers be exempted from the provisions of the proposed legislation to grant collective bargaining rights to Federal Civil Servants."²⁹

Montreal Agreement

"An agreement was reached between the City of Montreal and their engineers' group which was organized under the Professional Syndicate Act. Impressive salary gains and many fringe benefits were received by the employee-engineers and generally speaking, salaries for all positions were raised \$1,000 per annum retroactive to May 1964 and provision was made for a further \$450 per annum increase in May 1965. Seniority clauses were accepted and a grievance procedure established. Fifteen statutory holidays were recognized and provision for overtime pay was made."³⁰

Quebec Hydro Strike

"Quebec Hydro Engineers undertook a 35-day 'study session' without pay. Engineers received financial support from Confederation

²⁹Ibid., p. 17.

³⁰Ibid., p. 17.

of National Trade Unions (CNTU). The dispute was settled and a contract written, but with fewer gains than obtained by the Montreal City group. The Council of the Quebec Corporation of Engineers did not participate in these activities."³¹

Heeney Report Released

"The report of the Preparatory Committee on Collective Bargaining in the Public Service, which Committee was chaired by A. D. P. Heeney, was released. It recommends Collective Bargaining procedures for all branches of Federal Civil Service, with no exclusion for professionals. Initially separate groups such as engineers will be allowed to negotiate but the report recommends that the public service staff relations board should be free after a responsible transitional period to define whatever bargaining units it considers appropriate. This means that the engineering group could find themselves included with other groups under the Scientific and Professional category for bargaining purposes."³²

Advice on Legislation

"The Professional Development Committee submitted to the Council of the B. C. Association a recommendation which stated in part

³¹Ibid., p. 17.

³²Ibid., p. 18.

'that legal counsel be retained immediately to report to Council before September on the amendments required if any, in federal and provincial statutes, to enable Council to take a more active role legally on behalf of the employee engineers in negotiating with management. At the August 4th, 1965 meeting of Council, this report was accepted and Council agreed to take action in accordance with the particular recommendation quoted above.

Advice was received from our legal counsel that necessary legislation to permit employee members of the Association to bargain collectively could be as follows:

1. Add to Section 8 of the Engineering Profession Act a power to Council to establish an ancillary body to act as collective bargaining agent in labour relations with employee members of the Association.

2. Add to the Engineering Profession Act a series of sections headed 'Collective Bargaining by Employee Members of the Association', which would constitute a labour relations code for employee members.

Council agreed to call a general meeting of the Association to discuss the proposals of our legal counsel. This was subsequently held on November 1st, 1965 in the Oakridge auditorium. At this meeting, as reported in the November issue of the magazine, Council's actions were endorsed by an

overwhelming majority."³³

B. C. Meetings

During a meeting at Trail, B. C., the matter of collective bargaining was discussed at length. While no formal motion was made, there appeared to be little opposition to some form of legalized collective bargaining for professional engineers. At a meeting in Victoria, B. C., two weeks later, three questions were voted on: (1) Is collective bargaining a good thing in principle? (2) Should the Association promote collective bargaining? (3) Should the Association be the ultimate bargaining agent? The members gave their support to the first two proposals, but were divided on the last one. Two weeks later, at the Association's annual meeting in Vancouver, the members voted to support Council's action in seeking some form of legislation to permit collective bargaining for professional engineers.

1966

Engineer Shortage Reported

The Economic Council of Canada described the industry's shortage of engineers as critical, and the Technical Service Council of Canada stated that Canada's loss of engineers due to emigration was the

³³Ibid., p. 18.

greatest since 1960, forcing many employers to go overseas in search of engineering talent.

Draft Bill

A draft bill concerning bargaining by professionals was formally given to the Ontario Government by the Steering Committee on Negotiation for Professional Staffs. This bill advocates bargaining rights for professions conferred in special legislation, not under the Ontario Labour Relations Act--which gives unions their bargaining authority. Membership in the bargaining unit would be voluntary, arbitration would be used to settle an impasse, and there would be no certification procedure--thus no membership drives.

CURRENT SITUATION

The present atmosphere is largely one of apprehension. The Association in British Columbia is endeavouring to get some sort of consensus from their members as to the proper means of legalizing collective bargaining for the engineering profession. The Alberta Association is attempting to gain response to the questions that the collective bargaining issue raises. The Saskatchewan government is holding up labour legislation until recommendations from labour, industry, and the professions can be solicited. In Quebec professional employees must be placed in a separate unit under the new labour code. Two

groups in Quebec have formed units under the Professional Syndicates Act.

In Ontario, the Association is divided on the issue, with a Steering Committee promoting new provincial legislation.

Not only is there inconsistency between the policies of the various provincial associations, but there is no true consensus of opinion within any one association. While the majority of members agree that some sort of collective action is desirable, there is no real agreement about the particular kind of action that will best promote their interests.

Some members advocate inclusion under the Labour Act, in the manner of the Registered Nurses' Association of British Columbia. Some favour revision of the existing Professional Act, as does the Council of the Association of Professional Engineers of British Columbia. Others seek separate legislation, in the manner of the two groups of engineers that bargain under the Professional Syndicate Act, or the teachers in British Columbia under the Public Schools Act and the teachers in Alberta under the Alberta Teachers Act.

Thus, with the many alternatives available for legalizing collective bargaining for engineers, it is understandable that opinions about the proper solution to the dilemma vary widely. Added to this is the problem of retaining the Association as the bargaining agent, establishing a separate group under the auspices of the Association as a bargaining agent, forming a completely separate structure, or joining an existing trade union. It is only

natural that within a group whose working relationships are as diverse as those of the professional engineer, the opinions would be equally varied. However, there is a significant majority that favours "some kind of" collective action being fostered.³⁴

³⁴See page 18 in, Armstrong, W. M. "Changing Attitudes".
The B. C. Professional Engineer. December 1965. pp. 16-18.

PURPOSE OF COLLECTIVE ACTION

HISTORICAL REASON FOR COLLECTIVE ACTION

The historical reasons for collective action can best be analyzed by reviewing the theories of trade union development. These theories were formulated during the early 1900's, and have been laid bare in a book by Mark Perlman.³⁵ This section of the paper is largely an analysis of these theories, as reported in Perlman's book, with regard to answering the basic question-- "Why have trade unions come into existence in America?" This will tell why some members of our society have favoured collective action, and will provide us with a basis for discussing the reasons engineers seek collective action.

It should be noted that there has been no attempt to confine the analysis to Canada--in fact, the bulk of theorizing has been done in the United States. This, however, presents no problems for the Canadian and American labour movements can largely be viewed as a single process. The labour and product markets of the two countries are so interwoven that a unified union ideology is the only realistic approach. This was especially so during the early 1900's when the labour movement came into being.

³⁵Perlman, Mark. Labor Union Theories in America. Evanston, Illinois: Row, Peterson and Company. 1958.

The theories that have been expounded by the various authors have been broken down into five main groups by Perlman. These are: unionism as a moral institution, unionism as a revolutionary institution, unionism as a psychological reaction, unionism as a welfare institution, and unionism as part of the democratic process. In this paper Perlman's grouping will be used, with an attempt made to ascertain the key ideas and the differences in contributions by the individual writers. The theories can then be summarized as to their relationships to one another, and their relevance today. We will then have the basic background necessary for discussing the reasons for engineers seeking collective action.

UNIONISM AS A MORAL INSTITUTION

The moral philosophy of trade unionism was derived from both Christian and Socialistic collectivism, having the same underlying principles arrived at from different origins. The areas in which these two philosophies were fundamentally the same were pointed out by G. K. Chesterton. He felt that they both: rise from the depths of emotion--the emotion of comparison for misfortune, as such; trace the evil state of society to the competitive desire to accumulate riches; and propose to remedy the evil of competition by a system of bearing each other's burdens.

This moral philosophy primarily stressed the need for all men to pull together towards a common, morally right aim. The weak would be aided by the strong to lift them both up to greater heights. This thinking was aimed at equitably adjusting the principles of individualism in the light of the degradation that the mass production economy, under private enterprise, had brought about. Thus, the emphasis on moral betterment of the individual in preparation for a future life changed to one of betterment of society as a whole to establish a more satisfying present life. This meant that the application of religious ethics to the industrial, as well as the social atmosphere, was the key to personal fulfillment.

Contributions to this theory were largely of a liberal socialist nature. The greatest influence was gained by two writers, who varied from the purely socialist viewpoint by placing the church at the head of the trade union movement. These two men--Richard T. Ely and Father John A. Ryan--both felt that social and industrial problems could be overcome by the church keeping a close watch over union policies, and applying religious ethics in these areas.

Although Ely and Ryan were very close in their fundamental thinking, Ryan went farther than Ely in his methods of reform. They both had commitments to moral judgments and reform, cooperation and education--believing that trade unionism was the answer to the modern industrial wage system. However, Ryan went as far as to assert that employees must be educated

to the point where they can share in responsible management of the firm, eventually leading to profit sharing and active participation in decision making. The differences in these two men's thinking, however, was largely the result of their personal roles, and was more in the nature of the degree of emphasis than direct divergence of opinion.

This moral approach to unionism felt that unions were the result of spiritual poverty, brought about by economic misery. Unions were seen as educational institutions that would teach the worker habits of propriety, self-restraint, and self-expression--obtaining moral guidance from the church. In this way workers would eventually rise from their impoverished condition, and gain the controlling voice in management decisions.

The inadequacy of this theory today is largely the result of faulty thinking as to the course American workers would follow, and of decreasing need by the worker--as a result of greater educational opportunities, and greater social mobility. Further, the relationship of employees and employers, now being on a relatively equal basis leaves little need for the worker to utilize the moral-conditioning theory when he can reap adequate rewards while retaining the historical relationship.

UNIONISM AS A REVOLUTIONARY INSTITUTION

The theory of unionism as a revolutionary institution gained importance in America prior to the turn of the century. This theory was essentially Marxian, and many of its exponents had spent the earlier part of their life in Europe where it was developed. The union atmosphere at this time was unsettled, with many power struggles within and without the unions. The political atmosphere was harsh for union men, especially those of Marxian thought--who were often convicted for sedition.

The fundamental idea behind the Marxian theory was the eventual overthrow of the bourgeoisie by the workers. While the workers alone were thought to be responsible for any surplus in production, it was recognized that the bourgeoisie were reaping the harvest under the protection of the government. Through unionism the workers could overthrow the bourgeoisie, thus gaining control of the government and transferring the gains derived from surplus production to the workers. This meant that trade unionism was only a means to a greater social end, and that ultimate victory by the working class was economically, and therefore, morally justified. In that he believed that union actions were morally justified the Marxist was much like the Christian Collectivist, but whereas the latter was satisfied with the present system of government, the former required a revolutionary change in government to take place.

The supporters of this theory agreed on the basic philosophy behind unionism, feeling that if far-sighted social aims were not behind them they would stagnate by living on a day-to-day basis. Writers were at odds, however, on the way their ideas would be implemented. Some felt that the movement could work effectively through the American Federation of Labor (A. F. of L.) by "boring from within", while others felt they must act as a separate group by "smashing from without". This set tremendous obstacles in their path, for not only did they have to concentrate on initiating the Marxist theory, but they had to get around the powerful A. F. of L. while waging continual battles among themselves. The left-wing extremists in this group were characterized by Daniel de Leon, William Trautman, William Haywood, and William Foster. Eugene Debs was the predominant right-wing advocate of this theory.

Under the social-revolutionary theory expounded by these men unions came about as the result of technological change, which enables the bourgeoisie to take advantage of the worker, which in turn results in class conflict. This class conflict leads the workers to band together against a common enemy--the employer. Accordingly, the social interests of the worker are only advanced if the long-range aims of the society are strived for, not by accepting immediate rewards in lieu of these long-range goals. When these goals are achieved the original purpose of the union, promotion of class welfare,

will cease to exist--the purpose now being the promotion of productive efficiency. This deems it essential to have workers who are informed as to the historical consequences of their actions, and who are interested in promoting the welfare of all.

UNIONISM AS A PSYCHOLOGICAL REACTION

Unionism as a psychological phenomenon was actively pursued in the first two decades of the twentieth century. These theories, however, drew their beginning from Thorstein Veblen's economic theory of the 1890's. This theory undoubtedly affected the thinking of each writer in this area, whether he agreed with it or not.

Veblen's theory was essentially an explanation of the social-value schemes. He believed that social behaviour was determined by the relationship between man's instincts (parental, acquisitive, workmanship, and idle curiosity) and the institutional values, which were largely shaped by physical techniques of production. These institutional values were influenced by pecuniary values which were based on the natural rights of individuals, and by social values which were based on problems of physical production and mechanical function.

Veblen explained trade unionism as the result of mechanical process, which would eventually displace the pecuniary system in favour of the

new society-socialism. This was evidenced in the way natural rights were curtailed whenever these conflicted with the mechanical standardization process. He felt that unions did not want to satisfy economic problems alone, but were interested in establishing a new social order based on the production process. Because of this unions were regarded as a short-run phenomenon that were contributing to the long-run aims of socialism.

Each of the writers in this area believed that unionism was the effect of a conscious attempt on the part of the worker to protect the social changes that had come about as a result of industrialization. Thus, the prime cause was not a moral or an economic one, but a social one. The worker wanted to either return to the natural rights system he had been formerly under, or to establish a new social system to replace the existing one. The varying opinions of each writer in this area hinged on the manner in which they handled this issue.

Three men dominated this group of theorists: Carleton Parker, Robert Hoxie, and Frank Tannenbaum. Parker believed that a new social system, that would not be in conflict with the fixed characteristics of human nature, had to be constructed. Hoxie thought the public would eventually be the dominant factor, enabling them to control the other parties by externally applied pressure. Tannenbaum saw unions as a defensive mechanism that attempted to preserve the individuals' past rights from the de-humanizing effects

of the machine process. Thus, Tannenbaum completely disagreed with Veblen's concept of the machine process as a socially desirable phenomenon.

The psychological-environment theory, that the above writers basically agreed with, is based on the assumption that the worker is influenced by his environment, by the effects of economic insecurity, and by basic human instincts. The way in which these factors manifested themselves was thought to decide the attitude that the workers or union would display. It was thought that these factors could be understood, and therefore, controlled by psychologists. In this manner the pattern a union followed could be predicted and directed through proper use of psychological principles. Thus, it was thought to be possible to turn a union man into an anti-union man, and vice versa, through the proper use of psychological principles.

UNIONISM AS A WELFARE INSTITUTION

In the early 1900's the welfare institutional theorists came into focus. These were economists, led by George E. Barnett, who were unhappy about the way their overly-economic approach had disrupted the social system. In order to compensate for this, in varying degrees, this group of men began to apply welfare measures to their purely economic models. They began to include such ideas as minimum wages and social security in their thinking. Thus, readjustment of their studies to include an analysis of both costs and moral

rights (or ethics) was achieved.

The exponents of this theory believed that unions were not an end in themselves, but were a means to a social end. Unions were thought to have come about as a result of dissatisfaction among the working class, and were recognized as useful for solving the workers' economic problems. These theorists, while believing that the process of collective bargaining was the most economical means of solving this problem, did not rely on it entirely. If another method, such as legal enactment, became a more efficient one this would be the method they would encourage.

Because of the highly technical decisions that had to be made in matters that affected unions, these theorists believed that trained experts should be instrumental in handling many of the day-to-day problems. This implied that unions were set up on a rational basis and had rational aims to strive for--which came about as the result of a thorough study of the alternatives before them. Flowing from this was the basic assumption that unions came about as the result of a rational comparison of union action, to other forms of action, in their efficiency to gain labour's share of national wealth.

UNIONISM AS PART OF THE DEMOCRATIC PROCESS

The economic schools in England and Germany set the stage for the founding of a new school of thought in America, that of the jurisprudential-

historical discipline. This school of thought borrowed something from both schools in Europe, but did not centre around either one.

The theorists in England were almost completely against any government intervention in economic distribution, while the German theorists were as completely in favour of government control, in fact, they felt that government and economic problems were inseparable. In borrowing from these two extremes, the American theorists arrived at a middle-ground that seemed to uniquely suit their situation. This middle-ground placed the emphasis on individual rights, but required some measure of legality to prevail.

The theorists felt that they were studying a unique culture in America--a culture that placed a great deal of importance upon ownership of property. This insight led them to the further theory, that the purpose of unions was that of securing property rights (job rights) for the individual. This was thought to be the primary function of unions, with material gains important, but unnecessary to the main union function.

These sub-theories led them to the main theory, that the American union was of critical importance in the historical-democratic process, and that they are essentially bargaining agents interested in improving the status and individual liberty of the worker. This liberty, however, was not of the patriotic kind, but was the economic liberty that the worker possessed on the job.

The job-property rights pertained to the interests of the individual worker, rather than to the interests of a general economic class. The forces that endangered these rights were the forces of competition, whether it was cheaper labour or cheaper products--internal or external. Either one was seen to give trade unionism its reason for existence--the limiting of competition to protect and better the working conditions of its membership.

The two main theorists in this area--John R. Commons and Selig Perlman--felt that the protection of job-property, therefore, became the primary purpose of the union, and the process of collective bargaining became the most efficient method of attaining the desired results. This was a complete shift from thinking of a union as a means to a social end, to thinking of a union as being an end in itself. This system of industrial bargaining, through joint agreements, was seen to establish a body of law for the effective governing of both parties.

Accordingly, the need for political action became only the need to protect the bargaining position of the parties. A separate labour party was viewed as needless, as sufficient pressure could be put on existing political parties. This reasoning is exemplified in the organization of the A. F. of L., and the influence it has had on legislation.

Selig Perlman displayed an interesting insight into union reform, feeling that it could only come from within. He felt it could not be brought about by external forces--such as by government action. This can be seen today on the Canadian labour scene, and stresses Perlman's idea that unionism in itself is a historical force capable of creating its own traditions.

INCOMPATIBILITY OF THE THEORIES

The theories are similar in many ways, but their differences make each uncomplementary to the others. The uncomplementary nature of these theories makes any attempt at arriving at one central theory, through a combination of each prohibitive. The reasoning behind this can be studied in an unsophisticated fashion, by comparing each theory with one other.

The moral theory of unionism is incompatible with the revolutionary socialist theory, in that, while the latter feels a change in government is inevitable, the former feels this is unnecessary. The revolutionary socialist theory is incompatible with the economic welfare system as the former believes the union to be an instrument in developing the new social society, while the latter believes that the union is one means of attaining economic redistribution. The environmental psychology discipline is incompatible with the legal-historical theory as the former believes that a new social order based on the production system will come about, while the latter believes that unionism is an end in itself.

THE MOST USEFUL THEORY TODAY

For our purposes it is essential that the theory with the most validity should be exposed. In this way we may use this knowledge when analyzing the reason for engineers becoming inclined to accept some form of collective action. The theory that is most useful today is the legal-historical theory. This theory has been largely borne out by the success of the A. F. of L. The A. F. of L. bases its existence on its ability to conduct collective bargaining efficiently, enabling it to protect its members from competition and gain material benefits for them. The legal-historical theory is based upon these assumptions, while the assumptions the other theories have made are not borne out in any strong American union today.

A further factor that points to the current value of this theory is the implied worker-foreman relationship. Although it is not spelled out in the theory, it is implied by the job-property idea that the real bone of contention is the foreman. It was not the capitalists, but the foreman, that controlled the workers' property rights. This theory, in an indirect manner, gets at this problem as none of the others do.

REASON FOR COLLECTIVE ACTION BY ENGINEERS

With the background that the above discussion gives us we can proceed to analyze the reasons that have led, or may lead, engineers to seek

some means of collective action. This does not imply that the reasons for professionals seeking group determination can be directly compared with those of blue collar workers. Rather, group action by professionals can be looked upon as an extension of bargaining rights to a new group of employees.

The reasons for seeking collective action cannot be dealt with very satisfactorily in any general way, for there is no real consensus among engineers in this area. This diversity of opinion is well illustrated by Kenneth Prandy in the following passage.

Many of them (professional engineers) want their association to concern itself with their problems of salary and status, but the means suggested for the most part involve no element of conflict with management, in whose ranks indeed a number of them are to be found. Suggestions such as more publicity, to educate the public in the value of scientists and engineers, and co-operative discussions with management are typical of an attitude which believes that where a man does not receive the 'due reward' for his ability, then this is the result of ignorance or misunderstanding, and should be remedied for the benefit of all. The 'due reward' is what a man should earn, not what he can fight for by collective bargaining.³⁶

From the above it can be appreciated that any reasons for engineers favouring collective action will have to be generalized ones, and will of necessity be altered and re-emphasized, to correspond with each individual situation. It

³⁶Prandy, K. Professional Employees. London: Faber and Faber. 1965, 198 pp., p. 124.

should be emphasized that the action that is desired will also vary greatly from situation to situation.

If any one reason could be given for engineers favouring or becoming receptive to ideas of collective action it would undoubtedly center around the rationalization of engineering that has taken place in the last decade or two. This rationalization process, as was pointed out earlier, has drastically changed the engineer's work relationships. The typical engineer today is an employee in the true sense of the word. He works, within a large group of similarly oriented individuals, on a specific segment of a larger task. Instead of being assigned a task to complete, by using the knowledge available to him as a professional engineer, he is often given directions as to how the task should be completed. Thus, he is approaching the level of the technician, where the manner in which a job is to be completed is prescribed from above.

Rationalization, however, has done more than disenchant the individual engineer concerning the utilization of his professional abilities. It has often made the job repetitious, monotonous, meaningless, and fragmented. This has meant that certain segments of engineering work can be easily handled by technicians. Therefore, not only has rationalization often made the engineer feel he is doing subprofessional work, but it has given him a sense of insecurity. The latter has resulted from the very real fear that technicians can take over much of the work that engineers are presently engaged in.

This concern about job protection harks back to the legal-historical theory of trade unionism that was discussed in the previous section. Here the concern is with job-property rights. This is the concern of the individual for continued tenure in the job he is presently holding, or more simply stated, the fear of unemployment. This has real meaning for the professional engineer, especially the older members of the profession, for before 1950 there was a significant surplus of engineers. Further, as recently as 1957-1958, many companies laid-off large portions of their engineering staffs.

Many engineers have also been concerned with legal protection from the whims of their employers. Professionals, as individuals, have no recourse but to accept the decisions of management. As employees the professional engineer may have the attitude that is characteristic of other professionals, but he does not have the job control that many other professional groups have. As a result he may be treated as any other employee would be. This is well illustrated by Kenneth Prandy in regard to a professional code of conduct.

The importance of the code of conduct for independent professionals need not be disputed, but one can question how far it is applicable to those professionals who are employees. Of course they must be honest and diligent, but so must any other employee; as Lewis and Maude write, 'good service to an employer is not exclusively part of the professional code; it is the condition of employment at the ruling salary'. The

sanction, as with any other employee, is not expulsion from the professional group but dismissal by the employer.³⁷

Thus, while the employee-engineer is subject to the same discipline as any other employee, he does not have the legal protections that ensure fair treatment which most other employees have. As a result, many engineers are seeking this kind of protection, as their changing relationships at work require it. The answer is espoused by many to be collective action, although the kind of collective action is not agreed upon.

The telescoping or narrowing of salaries that took place in the prior decade has caused many engineers, especially older members of the profession, to seek collective action to counter this tendency. Connected with this are the problems of promotion restrictions, as many engineers have to move into management positions to ensure their promotability. The reason for this problem affecting older engineers is that they are more restricted in the career avenues that they may choose than the younger members of the profession. They feel that they are past the stage where they may easily change their roles to those of managers, they are less sure of their ability to rise many more levels, and their status has been altered as graduate engineers have been able to command a salary much closer to their own. As a result, collective

³⁷Ibid., p. 46.

action may be seen not as a means of attaining better wages and working conditions, but may be seen as merely a means of maintaining the present conditions and retaining the status position that they presently occupy. Thus, while these members may be feeling that a union or some other form of concerted group is highly undesirable, they may be feeling that it is necessary if they are to maintain the status quo, with whatever prestige is left to them, and with the acceptance of the fact that there will be a decline in their opportunity for continued advancement.

A reason for accepting collective action that is evident in the previous three, is lack of communication. With employee-engineers working in ever-larger groups, and with a larger number of engineers under one supervisor, there is an increasing feeling of being "lost in the crowd". As with many white-collar workers, the engineer loses his intimate relationship with top-management as his job becomes more specialized and fragmented. As this happens he more and more realizes that individual bargaining is less than adequate.

The combination of these events results in a tremendous loss of status for the engineer, and he is extremely interested in maintaining his status as a professional. The professional associations that engineers belong to are primarily status bodies, with the function of ensuring that members are qualified, and of maintaining or enhancing the prestige of the professional engineer.

Therefore, the protection of this status becomes one of the prime motivating forces for supporting some form of collective action.

A more straightforward reason for a change in attitude is the problem of an adequate salary. Not only are production workers gaining fringe benefits approaching or as great as professional employees, but the differential between production workers and salaried engineers has narrowed. While production workers increased their earnings three-fold between 1929 and 1955, salaried engineers managed to just double their wages during the same period of time. Further, much of the latter increase was the result of graduate engineers making greater salary demands than older members of the profession. It is therefore easy to understand how their concern over the relatively inadequate salary gains, has been a contributing factor to a change in attitudes towards wage determination by many engineers.

A last, but very important reason for some engineers favouring collective action, is the concern over specific grievances. It is often not a broad national or association issue that precipitates action, but rather, some local grievance. This grievance may often be unique in character, or seem to be petty, but such grievances can be the initiating force for collective action. This is not unique to the engineering situation, it is true of all employee-management relationships.

To sum up, the reasons for professional engineers accepting some form of collective action are many and diverse, however, the causes may be generally likened to the legal-historical theory that was examined in the previous section. There are many aspects that are different from the fundamental assumptions made in this theory, but the differences are largely ones of emphasis. The emphasis on protection and improvement of status would be much greater in the case under consideration.

COLLECTIVE BARGAINING

Before we discuss the organizational alternatives for engineers promoting collective action it might be wise to look at the collective bargaining process more closely. Collective bargaining has, unfortunately, been given many meanings by various individuals. It is often used as an all-inclusive term to describe any type of negotiation arrangements that exist between employees and employers. It will be useful to distinguish between these various terms.

Distinctions between the varying processes of negotiation have often been attempted, but with little success. Negotiations between employees and employers where the ultimate strike weapon is not in force have often been called "Collective Negotiation" or "Collective Begging". These terms would describe situations such as negotiation by the Civil Servants. "Collective

Bludgeoning" has often been used, in a tongue-in-cheek fashion, to describe wage determination attempts by professional associations. These attempts take the form of fee setting. However, the term "collective bargaining" has been used in the past to describe all these varying processes, and it will likely continue to be used in the future. Therefore, the best approach is simply to become aware of the different shades of meaning that are applied to this word.

Collective bargaining, in the true sense of the word, is a social process. It is a rule-making process that determines the employment relations between a specific group of employees and their employer. Collective bargaining is a bilateral method of determining wages, hours, and working conditions. It is a private approach to immediate and particular problems, that makes use of the strike as the ultimate weapon. It is not a rational process, but rather a process of compromise with the ultimate aim of securing a collective agreement.

Power is basic to the collective bargaining process. This power stems from control of either the product or the labour market. Through the use of power collective bargaining becomes a process of accommodation of conflicting interests of the parties backed up by power. It becomes a means of arriving at a settlement position, without prior knowledge of one's own settlement position, that will enable both parties to "live with" the resulting collective agreement. This last point is important. To be able to "live with" an agreement means that the terms of the agreement that are arrived at will be satisfactory to both parties

for the life of the agreement. If this is not the case there is little sense in consummating the bargaining, as the whole point in writing a collective agreement is to give stability to the employment relationships for a prescribed period of time.

Recognition, which implies security and tenure, is important to the process of collective bargaining. It is a continuous process, with the collective agreement acting as the guide to jointly solving continuous problems that arise during the life of the agreement. This was pointed out aptly by Harry Shulman and Neil Chamberlain in the following passage.

Theoretically, collective bargaining does not require a comprehensive collective agreement for a stated period of time. It requires only the recognition of the bargaining agency (the employees' representatives) and of the principle of action that mutual problems be jointly considered and jointly decided. But while each party, if it were in full control, might wish to retain its freedom to deal with problems as it deems best when confronted by them, the fact of joint participation makes commitment for the future almost inevitable. The desire of each party to be assured about the other's future conduct--that is, the desire for stability and security--makes the comprehensive collective agreement for a term the normal concomitant of collective bargaining. This reduces the possibility of solving problems on the basis of spot judgments without formulated policies. It requires each party to think into the future, to anticipate situations and to determine solutions before the situations arise. It requires the making of policy--which, when agreed upon, becomes the collective agreement.

Typically, then, collective bargaining involves, first, the negotiation of a general agreement as to terms and conditions of employment and, second, the maintenance of the parties' relations for the period of the agreement. The first process is the dramatic one which catches the public eye

and which is sometimes mistaken to be the entire function of collective bargaining. But in fact, it is to labor relations approximately what the wedding is to domestic relations. It launches the parties on their joint enterprise with good wishes and good intentions. The life of the enterprise then depends on continuous, daily co-operation and adjustment.

From this point of view, the heart of the collective agreement--indeed, of collective bargaining--is the process for continuous joint consideration and adjustment of plant problems. And it is this feature which indicates the great difference between the collective labor agreements and commercial contracts generally. The latter are concerned primarily with "end results"; the former, with continuous process.³⁸

Thus, it can be seen that collective bargaining is a flexible procedure. It must be continually molded and reshaped to meet the varying needs of the various parties, as their circumstances change. It is not a static process. All the possible situations that could arise concerning employment relations cannot be put into the agreement. This viability of the process is the reason for its widespread acceptance. It can be adapted to fit the particular and peculiar requirements of a wide variety of situations.

There are many factors that influence the collective bargaining process. The history of the bargaining relationship between the two parties, the history of bargaining in the industry, and the history of the unions'

³⁸Shulman, Harry and Chamberlain, Neil W. Cases on Labor Relations. New York: Foundation Press, 1949.

bargaining methods will all have a bearing on the outcome of current negotiations. The political atmosphere within the union and the company, rivalry between unions, and competition that the company is faced with also have a bearing on the outcome of the current negotiations. The same can be said of the current union and management personalities that are responsible for conducting negotiations, the present state of the economy, public opinion, political atmosphere, and the current legal environment. However, there are basic postulates that can be stated about the process of collective bargaining generally.

These postulates are the conditions under which collective bargaining takes place, or "the facts of life" of collective bargaining. Collective bargaining, in the true sense of the word, cannot take place without the existence of these conditions. The following twelve postulates are of primary importance.

1. The relationship between management and labour is a bilateral one. There is a real interdependence between the parties, with neither one being able to exist without the other. This is, however, often not evident before collective bargaining becomes established.

2. Both parties are committed to retaining the enterprise as an ongoing concern. This is fundamental to the relationship, as both parties are dependent upon the enterprise for their livelihood.

3. Both parties are committed to the private enterprise system.

It is fundamental to the process that the basic ideologies of the two parties are compatible.

4. There is a basic conflict between the two parties as to how the profits of the individual firm's output will be shared, and in what way.

5. Neither party can place the public good or interest in a primary position. Collective bargaining is done at a local level, while public interest is a national matter.

6. Both parties are driven by self-interest. Only when a firm presents proof that union demands will lead to the decay of a company, will the union become concerned with the ability of the company to pay their demands.

7. Neither party are monolithic organizations. Each party is composed of groups who have diverse interests and separate needs.

8. Each party is only partially informed as to the needs and desires of the other party. Not only is each party uncertain of what the other will demand of him and what he will accept, but they are also uncertain as to the minimum settlement that will be acceptable to their own group.

9. Much of the process will involve seemingly senseless ritual. However, this ritual is often essential to the process, as it dramatizes events for the benefit of those not immediately involved in the bargaining,

and it often gives the necessary time to smooth out internal differences in each party's bargaining group.

10. Both parties are subject to certain limits or restraints. These are both internal and external. They must take into consideration the wishes of their members, the current political atmosphere, general economic conditions, and current public opinion. The external restraints, while they may gain tremendous importance at times, must be viewed as of only secondary importance.

11. Both parties seek an agreement that they will be able to live with. It will do one party no good to exact measures from the other if the other cannot meet the requirements of the agreement.

12. A balance of power must be arrived at over time. If one party has the ability to impose its will upon the other no effective bargaining can take place. However, the balance of power cannot be looked upon as a static thing, but rather changes as the relationships between the parties continuously change.

With the emphasis that has been placed on bargaining power it may be wise to examine what the parties' bargaining ability will depend upon. By examining the factors influencing the union's bargaining ability we can understand the power relationship between the two parties. The union's bargaining ability will depend upon:

1. The degree of unionization, or number of members in a unit that support the union.
2. The degree of management resistance to, or fear of, the union.
3. Membership loyalty, and the extent to which they understand the union's policies.
4. The quality of union leadership, and the militancy and solidarity of the members.
5. The degree of coordination and cooperation with other unions and central bodies.
6. The financial ability to withstand a strike in the event an impasse occurs.
7. Current labour legislation.
8. The present attitude of the public toward labour.
9. The current economic environment.
10. The economic history, current conditions, and history of negotiations in an industry.
11. The length of the collective bargaining relationship with the employer.
12. The financial position of the employer.
13. The economic function it performs.

It can be seen from the above list that the power relationship is not a simple one, but rather a very complex one. It is unlikely that either party can accurately assess the bargaining power of the other party, or the difference in bargaining strength. However, in a sophisticated bargaining relationship a very good approximation will be available. In this case each party knows the limit, above which, an impasse will occur. This makes for a very stable relationship.

In summary, we have seen what a true collective bargaining relationship consists of. This will aid us in understanding the actual relationships, that the various parties wish to foster, in the forthcoming sections. We can judge the true meaning of the proposed relationships by seeing how they deviate from the process of collective bargaining as we have defined it.

ORGANIZATIONAL ALTERNATIVES FOR PROMOTING COLLECTIVE ACTION

PROFESSIONALISM vs. UNIONISM

Before we begin to discuss the organizational alternatives open to the engineering profession, it might be wise to deal with the alleged incompatibility of professionalism and unionism. This is a fundamental problem as the engineer's reluctance to embrace many forms of collective action, such as collective bargaining, is that in structure, philosophy, and methods it runs counter to his concepts of professionalism. Were it not for this alleged incompatibility the logical approach for engineers is to enroll in unions and carry out bargaining just like any other unionist. However, most engineers do feel that professionalism and unionism are not compatible concepts. Unless engineers' notions of professionalism accept the facts of collective bargaining as it is practiced today, or until a new type of collective bargaining is designed which does not offend notions of professionalism, it is unlikely that engineers will find an effective program of collective action. In reviewing the various alternatives available the reader will note that some are less repugnant to notions of professionalism than others.

In order to come to grips with this incompatibility of professionalism and unionism let us first analyze in a definitive context the terms

"professional" and "unionist". If they are incompatible then there must be elements of definition that set the terms apart. We can start by examining the characteristics of a unionist.

Unionists are generally characterized as strongly economic oriented individuals. These economic aims require that the union gain a greater share of the profits of the organization. First among these economic aims are wages. The wage and effort bargain is often regarded as the primary aim of unionism. Second, unionists are concerned with hours of work. This aim complements the previous one in such areas as "call-back" and "overtime". Third, unionists are concerned with working conditions. While this aim does not often have economic significance to the employer, as he must bear the cost of any on-the-job improvements. Fourth, unionists are concerned with job structure and technological unemployment. These considerations may make it necessary for the employer to establish a job evaluation program and to make concessions such as retraining programs for workers who have lost their job due to a technological change. Fifth, the unionist is concerned with benefits. These would be in the area of pensions, vacations, holidays, health and welfare, and unemployment insurance. Along with the above economic aims unionists also have aims that are not as directly tied to monetary considerations. These include job security, union security, and management rights. These considerations involve the employee-employer and union-

employer relationships, and the tenure of the union and its individual members. Included in this area would be firing and hiring practices, promotions and transfers, lay-off procedures, union control of employees, and grievance procedures. These activities tend to limit individual action in favour of more equitable treatment of the group.

On the other hand, while the professional has many aims in common with the unionist, he also has many that are in conflict. First, the professional is generally characterized by his concern for individual action. He is believed to have an independence of thought and action, and a self-reliance that results from qualification in the practices and techniques of his profession. Second, the professional has a code of ethics, and voluntarily accepts the disciplines and ethics imposed upon him. Third, he is concerned with self-regulation and self-discipline. He has usually obtained recognition for academic and practical training, has capabilities, and has obtained registration in a licencing body which is self-regulatory and self-disciplinary. The professional, then, recognizes only those individuals who are academically and practically qualified in the skills of the profession, he supports self-discipline in the maintenance of professional standards, he feels a stronger commitment to professional ideals than to the needs of management, and he desires the flexibility to decide the manner in which his work is to be performed.

The above professional characteristics, however, only take into account three of the five prerequisites of a program of collective action --unity (the desire to maintain a strong professional organization that includes all members of the profession), status (the desire to be accorded the recognition granted to the accepted professions, by the public and other professionals), and dignity (the desire to be treated as a highly skilled, capable individual who possesses the knowledge and practical experience necessary for capable performance in his professional role). Other characteristics which concern the remaining two prerequisites of a program of collective action--legality and effectiveness--are also important to the engineer. First, he wants his actions to come under the law (to be established by legislation, and granted as a right). For this reason he must either change the existing legislation, ensure that membership control by the Association will be legal, or design a Special Act. The resulting program must be effective--it must be successful. It must provide for the maintenance of adequate bargaining power. This will enable the engineer to gain a higher salary, better hours of work, better working conditions, and more equitable treatment from his employer. The economic considerations, however, may not have the same meaning for professionals as they have for unionists generally. The professional may view a higher salary more as a recognition of his worth as a professional than as a means by which he can attain a higher standard of living.

Professionalism as it applies to the engineering profession has been cogently discussed by George Strauss, a professor of business administration and a research economist at the Institute of Industrial Relations at the University of California, Berkeley. The following discussion will draw largely from Strauss' article entitled "Professional or Employee-Oriented: Dilemma For Engineering Unions". In this article Strauss has stated four values that comprise true professionalism in academic thought.

1. The professional claims that his occupation requires specialized knowledge and skills which can be obtained only through training (usually academic). As a consequence he seeks to restrict entry into his profession to those who can demonstrate their proficiency.

2. The professional claims autonomy, the right to decide how his function is to be performed and to be free from restrictions by nonprofessionals.

3. The professional feels a commitment to his calling ... To the extent that he is a professional he wants to win the respect of his professional colleagues as much as he wishes to advance in the corporate hierarchy. While he does not disdain making more money, a higher salary in itself may not be as important as it is for others.

4. Finally, the professional feels a responsibility to society for the maintenance of professional standards. He, therefore, supports self-discipline and feels bound by codes of ethics.³⁹

³⁹ Strauss, George. "Professional or Employee-Oriented: Dilemma for Engineering Unions." Industrial and Labor Relations Review. Volume 17, Number 4, July 1964. pp. 522-523.

At times, however, the aims of the professional are in conflict with his aims as an employee. As an employee he is dependent upon management, just like any other employee. He must seek pay raises and other economic gains in order to maintain his standard of living, and he must strive for arrangements that will promote security and protection from arbitrary management acts. The employee-engineer needs to expand the power, status, and freedom of his group in order to carry on his work in a professional atmosphere.

The employee-engineer is thus faced with conflicting aims. He desires to protect his professional status and dignity, yet in order to attain economic benefits he must embrace many of the concepts of unionism. It would appear, then, that professionalism is in conflict with unionism. However, it may be that professionalism is only in conflict with traditional blue-collar unionism. It is possible that a "new unionism" is emerging, or may eventually emerge, that will not be in conflict with notions of professionalism. School teachers may be cited as an example of this possibility. As an occupational group they are generally recognized as professionals, yet in many places (including Alberta) they are recognized as extremely strong and effective unions. In this regard, George Strauss has made some very astute remarks in concluding his article.

It is sometimes argued that professionalism is inconsistent with unionism. I think this position is fallacious, or at least, oversimplified (unless one adopts a highly restricted definition of unionism) ...

Unions differ from other kinds of professional occupational associations in that they seek legal certification as collective bargaining agents. Yet there is no priori reason why unions should not concentrate their activities on seeking purely professional objectives. Indeed I have suggested elsewhere that it is unrealistic to draw a sharp line between unions and purely professional associations: on the one hand, professionals often seek economic objectives, and, on the other, even building trades craft unions perform quasi-professional functions.⁴⁰

The type of union that Strauss is talking about is obviously not the type that Samuel Gompers exemplified. It would appear, then, that there may be a "new unionism" emerging that is not in conflict with notions of professionalism. If this is the case the engineering profession, in assessing the organizational alternatives available to them, must not foreclose the possibility of embracing this professionally oriented new unionism. While they may reject the conventional type of unionism that results from organization under the existing Labour Acts, they may find it advantageous to unionize under legislation that is designed to fulfill the requirements of their unique situation, in line with the idea of a professionally oriented new unionism.

⁴⁰Ibid., pp. 532-533.

It would appear that any system of collective action would have to fulfill the five prerequisites that were mentioned earlier--legal, effectiveness, unity, status, and dignity.

Just as employee-employer relationships are not static ones, the relationship between professionalism and unionism is flexible and changing. There is a current abundance of literature on the subject of professionalism vs. unionism⁴¹, and a great variance of opinion as to their compatibility.

⁴¹For example, see:

Barbash, Jack. "Union Philosophy and The Professional." The American Teacher. December 1957.

Boughton, V. T. "Engineers and the Union Movement." Civil Engineering. New York. September 1937. p. 653.

Carrothers, A. W. R. "Collective Bargaining and the Engineering Profession." The Alberta Professional Engineer. Vol. 20, No. 5, January 1966. pp. 12-15.

Collective Bargaining and the Professional Employee. Edited by John H. G. Crispo. (Conference Proceedings, December 15-17, 1965) Toronto, Ontario: Centre for Industrial Relations, University of Toronto. 1966, 122 pp.

Deutsch, Z. C. "Collective Bargaining: Does it Conflict with Engineering Ethics?" Chemical and Metallurgical Engineering. August 1944. p. 264.

Forrest, T. Carr Jr. "Professionalism or Unionism--Facing the Issue." American Engineer. March 1954. pp. 23-25.

Thinking in this area will continue to be of great importance to engineers who are faced with the problem of choosing the most appropriate organizational alternative for the members of their profession.

Goldstein, B. "Unions and the Professional Employee." Journal of Business. October 1954. pp. 276-284.

National Society of Professional Engineers. Professional Responsibility vs. Collective Bargaining. Washington, 1963, 10 pp.

Schriener, John. "Professionals or 'Labour'?" Financial Post. Vol. 55, December 16, 1961. pp. 1 & 9.

"Unionism vs. Professionalism." Professional Engineer. September 1941. pp. 30-32.

MEMBER CONTROL BY THE PROFESSIONAL ASSOCIATION

One method of gaining some control over wage determination in the engineering profession that has been advocated by some individuals is control at the source, i.e. membership control by the professional organization. This type of control would be similar to that exerted by the legal and medical professions. A large part of these professional associations' functions has always been the establishment of minimum levels of employment.

This does not mean that this is the only, or even the most important, function of these associations. They are concerned with the study function, education of members and the public, protection of members and their status, qualification, and professional conduct. They also enable greater member contact, provide an avenue for publications, and provide a means of supporting standards. However, for all of these functions past that of study, control of membership is necessary if the association is to be a successful one. This can be done by either controlling entry into the profession, controlling the salary level at which members will work, controlling conduct of the individual members, or some combination of these three.

The legal and medical professions have a degree of control over the education function, licensing, and conduct of their members. This enables

them to exert some influence over the level of employment at which their members will work. However, in the engineering profession their professional association does not function in quite the same manner. One writer has stated:

To sum up the aims and activities of the professional associations for scientists and engineers, it is clear that the major emphasis is on the study function. This is true not only for the engineering institutions, of which there is one for almost every specialism of any importance, but even of those other Institutes which were founded primarily to perform other functions than that of study. A purely study or learned society cannot be a professional body, but the function which makes it one, that of qualification, only arises out of the study function. Qualification by these bodies in no case carries with it a monopoly of practice, as it does for example in medicine. It is solely a hallmark of competence. Membership usually implies the acceptance of a code of conduct, but for those who are salaried employees, that is, the great majority, this code means little or nothing more than what is required of them anyway as employees. The threat of dismissal is more real than the threat of expulsion from the association.⁴²

As the above passage points out, monopoly of practice is an important part of the qualification procedures in the medical profession, and threat of expulsion from the association is a very real fear for this reason. The question that remains for us to answer is whether or not the engineering profession can exert this kind of membership control that results in monopoly of practice. We will discuss this in a later section, and will attempt to suggest the reasons

⁴²Prandy, Kenneth. Professional Employees - A Study of Scientists and Engineers. London: Faber and Faber. 1965, 197 pp., p. 82.

for and against such a proposal.

COLLECTIVE BARGAINING UNDER THE LABOUR ACT

Some groups of engineers in Quebec and Ontario have advocated that engineers be recognized under the appropriate labour relations act for the purpose of collective bargaining. In British Columbia the Registered Nurses' Association is organized in this manner. This recognition was obtained shortly after the war, and the British Columbia Nurses' Association is the only provincial Association which is recognized for bargaining purposes under any provincial labour relations laws.⁴³

For such recognition to be made available the various provincial labour acts would have to be altered. The section that would have to be altered would be the one that defines "employee". All the acts, with the exception of the revised Quebec Labour Code, have a clause that excludes engineers from the definition of an employee. The pertinent sections from the Ontario and British Columbia labour acts will serve to illustrate this.

For the purpose of this Act, no person shall be deemed to be an employee,

- (a) who is a member of the architectural, dental, engineering, land surveying, legal or medical profession entitled to

⁴³"Memo to: All Registered Members of the Association."
The Association of Professional Engineers of British Columbia. October 8, 1965,
p. 1.

practise in Ontario and employed in a professional capacity; or

- (b) who, in the opinion of the Board, exercises managerial functions or is employed in a confidential capacity in matters relating to labour relations.⁴⁴

"Employee" means a person employed by an employer to do skilled or unskilled manual, clerical, or technical work, but does not include

- (a) a manager or superintendent, or any other person who in the opinion of the Board
 - (i) exercises management functions; or
 - (ii) is employed in a confidential capacity in matters relating to labour relations;
- (b) a member of the medical, dental, architectural, engineering, or legal profession qualified to practice under the laws of the Province of British Columbia and employed in his professional capacity.⁴⁵

It should be noted that both of these codes restrict professional exclusions to those that are employed in a professional capacity. Therefore, an engineer who is working as a clerk would be included under the definition of an employee, but whether an engineer who is working primarily as a draughtsman

⁴⁴Ontario Department of Labour. The Labour Relations Act: Revised Statutes of Ontario, 1960. Toronto, Ontario: Queen's Printer. 1965, 47 pp. Sec. (1) (3), p. 4.

⁴⁵British Columbia Department of Labour. Labour Relations Act and Regulations. Vancouver, British Columbia: Queen's Printer. 1966, 48 pp. Sec. (2) (1), p. 1-2.

would be included is less than clear. Thus, interpretation of the meaning of the various acts by the provincial labour relations boards becomes all important.

A group of engineers that are basically doing the work of technicians could possibly be certified under the existing labour act, whether or not they would want such certification is another matter.

COLLECTIVE BARGAINING UNDER A SPECIAL ACT

A third alternative for collective action, that has been espoused by some members of the engineering profession, is organization under a Special Act. Many teachers have found merit in this approach, e.g. in British Columbia under the Public Schools Act, and in Alberta under the Alberta Teachers Act. In Quebec some engineers have organized under the Professional Syndicate Act--without the legal right to strike, and in Ontario a group of engineers is endeavouring to obtain separate legislation to provide collective bargaining machinery for professionals.

This approach, though it has many advantages, is a very lengthy one. It must first be ascertained that the majority of the members of the profession wish such an act. An appropriate act must then be drawn up, with the effect that it will have upon other labour legislation considered. Finally, the new act must be made into legislation by government decree. It can be appreciated that this is no simple task.

Organization under a special act would have the effect of separating professionals from groups that are organized under the provincial labour acts. This might afford the members of the profession a measure of dignity, while still providing for effective collective action. However, this approach is not without its disadvantages. The gain in status by employing this approach may be more than offset by a loss in effectiveness. That is, by excluding sub-professionals from their bargaining unit, the engineer groups may weaken their bargaining power to an intolerable extent.

Thus, as with the previous approaches, this approach has both its good and bad points. No approach is devoid of disadvantages. The professional engineer, then, is in a real dilemma. He has many alternatives to choose from, but none of them are wholly acceptable. He is faced with the problem of choosing the one that gives him the most advantages--or the advantages he wants most, and the least disadvantages.

COLLECTIVE BARGAINING UNDER A REVISED PROFESSIONAL ACT

Another alternative available to the professional engineer is revision of the professional act to provide for collective bargaining. The various professional engineers' acts as they stand at present are concerned with such matters as legalizing the Professional Association, the Council of the Association, and the Board of Examiners of the Association. They are also

concerned with licensing, qualification for membership in the Association, examinations, registration, and penalties for unprofessional conduct. The various acts, however, do not make any provision for collective bargaining.

The Council for the Association of Professional Engineers of British Columbia has recommended to their members that their professional act should be revised. Council's recommendations were the following.

... to ask for authority under the Engineering Profession Act to add to Section 8 a power of Council:

"To establish an ancillary body to act as collective bargaining agent in labour relations for employee members of the Association."

and to add to the Act a series of sections headed "Collective Bargaining by Employee Members of the Association" which would constitute a labour relations code for employee members.⁴⁶

It should be noted that the revision was addressed to "employee members of the Association". This is very important for it underlines the diversity of employment relationships that exist throughout the profession. The revision could not include all members of the profession, for if it did many engineer-entrepreneurs and engineer-managers would be included, and who would they bargain collectively with?

⁴⁶"Memo to: All Registered Members of the Association." The Association of the Professional Engineers of British Columbia. October 8, 1965, p. 2.

Thus, we have four alternatives before us. None of them are perfectly satisfactory. Some alternatives emphasize the importance of dignity and status to the engineer, others place the emphasis on effective collective bargaining. There is obviously no easy answer, and possibly not even a good one. However, this reality does not help the individual engineer. He is still faced with the necessity of choosing the best possible alternative. In the following section we will endeavour to point out the realities of each alternative.

PROBLEMS IN ORGANIZATIONAL ALTERNATIVES

MEMBER CONTROL BY THE PROFESSIONAL ASSOCIATION

None of the alternatives discussed in the previous section will completely satisfy the needs of the engineering profession for collective action. It would appear that a program of action would have to take into consideration five prerequisites--legal, effectiveness, unity, dignity, and status. The problem is that while collective bargaining would provide the first two prerequisites, its structure, history, and methods run counter to the latter three. Thus, in this section we will point out the reasons why the various alternatives do or do not satisfy each of the above prerequisites. In this way some conclusions can later be drawn as to the most appropriate means of providing collective action.

Member control by the engineers' professional association is the most appealing organizational alternative for those engineers that are extremely professional oriented as it would provide the self-regulation and self-discipline that, in the minds of the public, exemplify professionalism. If collective action could be effectively fostered by this method, of setting down fees, the status and dignity of the professional engineer would be enhanced, and unity in the profession would not be endangered. The Association rather than bargaining with employers, would be responsible for establishing

and enforcing an elaborate schedule of fees.

Under this alternative the Association would assume many of the characteristics of the Canadian Medical Association, or the College of Physicians and Surgeons. These latter groups have, for quite some time, been the spokesmen for the members of the medical profession in matters that affect their remuneration. A good example of this is the current agreement between the Government of Alberta and the College of Physicians and Surgeons, Province of Alberta. This agreement provides the means by which recipients of social welfare may obtain adequate medical care. The agreement, in part, states:

... AND WHEREAS the Government and the College have negotiated an agreement for the provision of the said services by the College, through its members, on the terms and conditions hereinafter set out;

NOW THEREFORE the parties hereto, for the considerations, hereinafter set out, agree as follows:⁴⁷

It is obvious from the wording of the above agreement that the College of Physicians and Surgeons are directly concerned with the remuneration of their members for the medical services that they provide. In this example, however, the College is able to deal with one body representing a large group

⁴⁷The Government of the Province of Alberta and The College of Physicians and Surgeons, Province of Alberta. (An agreement dated March 16, 1959 to provide medical treatment for recipients of social welfare.)

of individuals. This is not ordinarily the case. The charging and collecting of fees, has in the past, been done on an individual basis--between the physician and his patient. This means that some system of fee-scheduling is essential if consistency is to prevail throughout the profession. This is not merely a matter of ensuring that members of the medical profession make an adequate living, rather, it provides an important means by which standards can be maintained, or upgraded. It has been long accepted that member control is essential in the medical profession if the public is to be safeguarded from malpractice problems.

This alternative is appealing to members of the engineering profession who are keenly aware of the need to improve their remuneration, yet are loathe to jeopardize the status and dignity of their profession. However, can this method be used by the engineering profession? What is essential to its smooth working? These important questions have often been left unanswered, or ignored.

The prime ingredient that enables a profession to maintain control of its members through an association is monopoly of practice. The association must be able to ensure its members that qualification for membership in the association carries with it a monopoly of practice. This has been aptly illustrated by Kenneth Prandy in the following passage.

To sum up the aims and activities of the professional associations for scientists and engineers, it is clear that the major emphasis is on the study function. This is true not only of the engineering institutions, of which there is one for almost

every specialism of any importance, but even of those other institutes which were founded primarily to perform other functions than that of study. A purely study or learned society cannot be a professional body, but the function which makes it one, that of qualification, only arises out of the study function. Qualification by these bodies in no case carries with it a monopoly of practice, as it does for example in medicine. It is solely a hallmark of competence. Membership usually implies the acceptance of a code of conduct, but for those who are salaried employees, that is, the great majority, this code means nothing more than what is required of them anyway as employees. The threat of dismissal is more real than the threat of expulsion from the association.⁴⁸

The above passage illustrates not only the importance of the qualification function, but the importance of privileges and restrictions that go with it. In the medical profession these privileges and restrictions are manifold, but in the engineering profession they are important in only a negative manner. A professional who is more concerned about expulsion by his employer than dismissal from his professional association is certainly feeling few professional restrictions.

Thus, if member control is to be affected by an engineering association certain privileges and restrictions must be made more meaningful in order to provide a monopoly of practice. That is, the labour market for engineers must be controlled, to a certain extent, by the Association. This

⁴⁸Prandy, Kenneth. Professional Employees: A Study of Scientists and Engineers. London: Faber and Faber. 1965, 197 pp., p. 82.

harks back to our earlier discussion of power. The power that the Association needs in this case is that which will enable it to effectively control the salaries and employment conditions of those individuals who fulfill the function of a professional engineer. The question then is by what method can such monopoly practice be obtained.

One method is to regulate the number of professional engineers entering the field. This may be done by limiting the number of individuals enrolled in university programs that lead to a bachelor's degree in engineering. This approach, however, assumes that the only path that leads to a career as a professional engineer is through an institute of higher learning. This is not the case at present. It is possible for an individual to be performing the accepted functions of a professional engineer in industry without ever having completed the university courses that lead to a bachelor of engineering degree. Hence, unless university graduation becomes mandatory in the profession, and its practice, it would not be possible to completely control the credentials of persons practicing engineering.

Another method of regulating the number of engineers is by giving the Association the legal power to licence practitioners. The medical and legal professions both make use of this means in order to assure that only qualified members of their profession are legally permitted to practice in their respective fields. However, while the Councils of the various engineers'

associations encourage licencing practices, a large number of engineers feel that obtaining a licence is unnecessary. They feel that it is an expensive and time-consuming procedure, and one that will pay them few dividends.

Membership control by the Association presents the problem of legality, the problem of promoting and maintaining interest in licencing procedures, the problem of providing for acceptable leadership and adequately regulating members, and the problem of becoming an economically effective body. It would appear, then, that this approach presents more problems than it answers. On the other hand, unity within the profession would be safeguarded, as it would include all engineers and there would be no differentiation between entrepreneur-engineers, manager-engineers, and employee-engineers. The status and dignity of the professional engineer would be maintained, and possibly enhanced, as the public would see him in a more professional role. However, this approach may be extremely impractical. The associations have no legal control over the entry and exit of individuals in the professional engineering field, either in the education or regulatory areas. Thus, while the Association can establish qualification procedures, it cannot legally assure qualified members a monopoly of practice. Present control over qualification is, as Prandy has stated, "... solely a hallmark of competence".⁴⁹

⁴⁹ibid., page 82.

COLLECTIVE BARGAINING UNDER THE LABOUR ACT

We noted earlier that professional engineers, under United States labour legislation, are given access to collective bargaining procedures. Under the Wagner Act of 1935 small groups of employee engineers could be absorbed in larger industrial units without recourse to a separate certification vote. Some students of the subject have claimed that this was the cause of the formation of engineering unions. That is, the union was formed as a defensive move to avoid absorption by large industrial unions.

Some students dispute this conclusion and cite active organizations such as the Federation of Technical Engineers, Architects, and Draftsmen's Unions (AFL) or the Engineering and Technical Division (formerly the Federation of Architects, Engineers, Chemists and Technicians) of the United Office and Professional Workers (CIO) as evidence. The former dates back to 1918, and the latter was founded in 1934 and affiliated with the CIO in 1939. However, in 1947, the section of the Wagner Act that was thought to be responsible for the formation of engineers' unions was altered.

The Taft-Hartley Act of 1947 under section 9 (b) stated that:

The Board shall decide in each case whether, in order to assure to employees the fullest freedom in exercising the rights guaranteed by this Act, the unit appropriate for the purposes of collective bargaining shall be the employer unit, craft unit, plant unit, or subdivision thereof: Provided, that the Board shall not (1) decide that any unit is appropriate

for such purposes if such unit includes both professional employees and employees who are not professional employees unless a majority of such professional employees vote for inclusion in such unit; or (2) decide that any craft unit is inappropriate for such purposes on the ground that a different unit has been established by a prior Board determination, unless a majority of the employees in the proposed craft unit vote against separate representation, or (3) decide that any unit is appropriate for such purposes if it includes, together with other employees, any individual employed as a guard to enforce against employees and other persons rules to protect property of the employer or to protect the safety of persons certified as the representative of employees in a bargaining unit of guards if such organization admits to membership, or is affiliated directly or indirectly with an organization which admits to membership, employees other than guards.⁵⁰

The above clause ensured professional employees that they would be provided separate certification elections, their rights to the restrictions and privileges of collective bargaining law were retained, they were allowed to reject any collective bargaining representation through a majority vote of the professionals concerned, and they were free to choose either a professional or a nonprofessional unit for collective bargaining purposes. Thus, professional people were placed within a new legal framework, and it became necessary to adopt a definition of a "professional employee". Section 2 (12) of the Taft-Hartley Act attempted to do this, in order to provide a smooth implementation

⁵⁰ Senate and House of Representatives of the United States of America in Congress. The Labor Management Relations Act. Washington, D. C., 1947 (Public Law 101 - 80th Congress, Chapter 120 - 1st Session, H. R. 3020).

of the preceding provision, in the following passage:

The term "professional employee" means--

(a) any employee engaged in work (i) predominantly intellectual and varied in character as opposed to routine mental, manual, mechanical, or physical work; (ii) involving the consistent exercise of discretion and judgment in its performance; (iii) of such a character that the output produced or the result accomplished cannot be standardized in relation to a given period of time; (iv) requiring knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and study in an institution of higher learning or a hospital, as distinguished from a general academic education or from an apprenticeship or from training in the performance of routine mental, manual, or physical processes; or

(b) any employee, who (i) has completed the courses of specialized intellectual instruction and study described in clause (iv) of paragraph (a), and (ii) is performing related work under the supervision of a professional person to qualify himself to⁵¹ become a professional employee as defined in paragraph (a).

As a result of this legislation, professionals in the United States unionized prior to 1947, or who have sought unionization since that date, cannot claim that their move to unionism was purely a defensive move. Unionization by professionals is now considered an offensive action designed to promote higher salaries and better working conditions.

⁵¹Ibid., section 2 (12).

As was stated earlier, in Canada, attempts at unionization (or inclusion under the Labour Act) have always been construed as offensive actions. The reason for this is the exclusion of professionals under the legal definitions of "employees". Under all Canadian labour legislation, but Saskatchewan's and Quebec's, engineers are specifically excluded from the provisions of the pertinent Act. This does not mean that engineers cannot carry on collective bargaining with their employers. Rather, it means that engineers are not able to embrace the rights, and the obligations of the legislation. They must therefore work under common law. In order for engineers to gain these rights and obligations then, the definitions of employees under the various acts must be changed so as to include engineers. The Quebec Corporation of Professional Engineers has requested in a brief presented to federal authorities that this kind of action be taken. They have requested a change to the Industrial Relations and Disputes Investigation Act, to remove the present exclusion of engineers from the Act. Thus, amending existing statutes governing collective bargaining is another alternative that the profession could follow.

If this alternative was followed what would be the legal implications, what would it mean to unity in the profession, how would it affect the status and dignity of the professional engineer, and how effective would the resulting collective bargaining be? These are important questions

that must be answered. In the answers to these questions lies the answer to the acceptability of this alternative.

The first question, that of unity in the profession, is very important as this alternative may well jeopardize unity because not all engineers would be subject to the statute. The reason for this lies in the clause that defines an "employee". Under most statutes the following classes of employees are exempt from provisions of the statutes.

... a manager or superintendent, or any other person who, in the opinion of the Board, exercises management functions or is employed in a confidential capacity in matters relating to labour relations ...⁵²

Further, the definition of an employer is simply stated as:

... employer means any person who employs one or more employees ...⁵³

The problem is obvious. The engineering profession is not composed solely of employee-engineers, but includes entrepreneur-engineers and manager-engineers. These latter two categories fall within the above exclusions, and clearly such persons would not benefit under this approach.

⁵² Canadian Department of Labour. Industrial Relations and Disputes Investigation Act. Ottawa, Canada: Queen's Printer. 1948, 28 pp., (2) (1) (i) (i), p. 2.

⁵³ Ibid., (2) (1) (i), p. 2.

As a result, under this organizational alternative, only a portion of the profession would attain bargaining privileges under law. Engineers who are employed, but are in supervisory or staff consultative positions, would not fall under the act. The former are excluded as a member of the management team, and the latter are excluded because of their confidential relationships with management. The other group, the entrepreneur-engineers, are excluded by virtue of their being employers. They, in effect, are on the opposite side of the fence in relationship to the group of employee-engineers.

Under this alternative, contradictions in the structure and methods of the professional Association and collective bargaining are most evident. The structure of the professional Association and its programs simply does not distinguish among its membership according to role in industry, whereas the statute does. As a result, adoption of the statute could well divide the Association. Employee-engineers would be segregated from entrepreneur and manager-engineers, and would likely be viewed as inferior members of the profession, or unfit for membership in the professional Association. In addition, the alternative still leaves the question of the compatibility of professionalism and collective bargaining methods with engineers covered by the statute. Under the statute engineers will have to behave as union members in order to effectively enjoy the rights and rewards of the statute. If they did not adopt trade union methods it is difficult to see how they could effectively

benefit by the statute. The question is, "Would they be prepared to do so?"

The following is one possible answer to this question, i.e. the compatibility of trade union methods and professionalism.

But what of the claim that engineering unions can and do operate in a professional manner and on a basis consistent with professional concepts? Again, the facts overwhelmingly dispute the claim.

Engineering unions have engaged in the usual tactics of labor unions and have employed all of the standard techniques of other unions. Strikes and picket lines have been employed regularly by virtually all of the engineering unions. Agreements have been entered into with unions representing production employees for mutual strike action. The public has been treated to the spectacle of engineers parading before the plant gates with banners and placards. Attempts have been made to keep other employees from reporting for work and in at least one instance violence erupted as a direct result of the engineers' strike activity.

Where collective bargaining contracts have been negotiated, the engineers' unions have stressed grievance procedures and seniority in a wide range of controls and limitations on the relationships between the company and the individual engineering employees. As noted some years ago by T. Carr Forrest, Jr., then-president of NSPE, in an article on "Professionalism or Unionism--Facing the Issue"--

The engineering unions contend that they can operate in a professional manner and without sacrifice of the individualism which is inherent in a profession. But a review of a collective bargaining agreement between one of the nation's largest employers of engineers and the engineers' union, a 58-page document, indicates coverage of everything from standard work schedules to vacations, from general adjustment in rates of pay to layoff allowances, from occupational classifications to professional standards, and on and on to the extent of 35 separate subjects which govern

the daily working life of the professional employees. When an individual professional engineer is "represented" by force of law and collective bargaining agreement to the extent of almost every phase, detail and aspect of his professional activities, it cannot be successfully maintained that collective bargaining is compatible with professional status. If professional development and advancement are to be regulated in 35 ways the individual may or may not climb the professional ladder, but he will climb it, if at all, only on the rungs which are contained in the "agreement" and he will climb it no faster than the "agreement" permits.

Labor oriented students of engineering unionism have confirmed the basic conflict between professionalism and unionism. Jack Barbash, a labor economist with the University of Wisconsin and formerly with the AFL-CIO, has commented: "Once the white collar worker gets over the initial trauma of being in a union, he behaves like a bricklayer." And the former president of ESA (Engineers and Scientists of America), following its demise, stated that engineers would have to choose between unionism and professionalism, "You can't ride two horses." The president of the American Federation of Technical Engineers, AFL-CIO, has declared: "In modern industrial management, the engineer is more closely akin to the machinist at his lathe and the production worker on the line."⁵⁴

This, however, is only one opinion. Dean A. W. R. Carrothers of the law school at the University of Western Ontario, has expressed the view that collective bargaining is compatible with professionalism⁵⁵, as

⁵⁴ National Society of Professional Engineers. Professional Responsibility vs. Collective Bargaining. Washington, D. C., 1963. 10 pp., pp. 2-3.

⁵⁵ Carrothers, A. W. R. "Collective Bargaining and the Engineering Profession." The Alberta Professional Engineer. Vol. 20, No. 5, January 1966. pp. 12-15.

have Forrest S. Mortimer (President of the Association of Industrial Scientists, Emeryville, California), Gust Warner (President of the Research and Engineering Professional Employees Association, Whiting, Indiana), and many others⁵⁶.

The question is therefore one that is open to discussion.

However, in this writer's opinion, there is little doubt that this particular organizational alternative will present problems with reference to professional status and dignity. Engineers do not want to be associated with the union movement, or to be accused of using trade union methods (such as strikes, picketing, blacklisting, boycotting, or work stoppages), as it takes away from the status and dignity they now enjoy. However, under this alternative they really do not have much choice. To illustrate this, not one engineers' "union" call themselves a union. They prefer to be known as "associations", or as "guilds". This was particularly evident in a recommendation made by the Employee Members Committee of Association of Professional Engineers of Ontario, which stated that additions to the Professional Engineers Act should "... prohibit negotiating groups of engineers from affiliation with a trade union or with an organization which is affiliated with a trade union."⁵⁷

⁵⁶ Mortimer, F. S. and Warner, G. "Collective Bargaining for Professional Scientists and Engineers." Chemical and Engineering News. November 8, 1954. p. 4456 ff.

⁵⁷ Phillips, E. G., Chairman. Negotiation Rights for Professional Staffs. Steering Committee on Negotiation Rights for Professional Staffs: Toronto. April 1965, 7 pp., p. 6.

This is just one example of the stigma that professional engineers attach to any affiliation with the trade union movement.

The final question to be answered, in appraising this particular organizational alternative, deals with the economic effectiveness of this approach. This alternative would give the legal rights and restrictions spelled out in the various labour acts to the employee members of the profession. However, to be effective the engineer must be prepared to use trade union methods--methods which collectively give the union the power to force the employer to accede to its demands. As noted earlier, engineers appear to find these methods repugnant to their professional precepts. However, under this approach bargaining power must be attained and presumably it would have to come from the splinter group of employee engineers.

Thus, the questions that rise to paramount importance are, "Can engineers gain the needed bargaining power by using methods which are not repugnant to the profession?" and "Could the covered group gain sufficient bargaining power to attain the goals they desire?" The first question involves the extent to which legality and economic effectiveness can be sacrificed in favour of the professional goals of unity, status, and dignity. In order to gain effective bargaining power the professional goals may have to be placed in a secondary position. Bargaining power represents the ability of a group of employees to force their employer to accede to

their demands--demands which an employer is often very reluctant to accede to. As a result employees must be prepared to use any methods which are at their disposal. Consequently, reluctance to use methods which are "unprofessional" detracts from the employees' bargaining power. "Paper tigers" seldom produce good contracts.

Turning to the second question, one additional aspect of bargaining power is the ability of the employees' representative to gain the united support of its members and other employee groups when strike action is called for. Will this strike support be available, or even if it is available, will it be effective? Most assuredly, only some engineers can participate in the work stoppage. Would other engineers do the strikers' work? These are very real questions because engineers in supervisory positions not only may feel the need to protect their own jobs, but also may charge striking engineers with "unprofessional conduct". It may happen that supervisory engineers may have little sympathy for striking engineers and would not feel obliged to assist them.

In addition, the engineers may need the support of craft or industrial union members if a work stoppage is to be meaningful. This situation can be likened to that of the oil company employees, where support of unions such as the Teamster's is necessary before any economic hardship can be inflicted upon an employer.

The question of the effectiveness of this alternative, therefore, is largely a matter of determining if engineers are prepared to adopt the structure and methods that the alternative dictates they adopt. It would mean that the professional goals of unity, status, and dignity may have to be largely neglected. The profession would be split on the basis of occupational relationships, and the public image of engineering as a profession may be damaged. In addition, the employee-employer relationships formed under this alternative would be highly structured and highly formal. It would be extremely difficult to change them once the alternative was adopted. As a result it may be unwise to accept this alternative solely as a "temporary" means of providing collective action for members of the profession.

COLLECTIVE BARGAINING UNDER A SPECIAL ACT

Many professional engineers in Canada would like to be represented in somewhat the same manner as industrial employees who are represented by unions. However, this group of engineers feel either that becoming a part of the union movement would be unprofessional, or that working under the existing labour legislation would be unwise. That is, they feel that the existing legislation is not adequate, nor was it meant, for professional employees.

As a result, some members of the profession have advocated the establishment of a collective bargaining structure under a Special Act.

Such an Act could take into account the differences between professional Association organization and structure, and industrial concepts such as employee and manager. The Act could spell out a more professionally suitable means of resolving an impasse (such as binding arbitration or acceptance of a conciliator's decision), it could provide for a more suitably composed bargaining unit (perhaps similar to ones existant in the teaching profession, where all members of the profession but school superintendents are included), and the Act could make it possible to attain the goals of the profession without recourse to trade union concepts and methods. Some feel that such an Act should apply to all professions, others feel that it should apply only to the engineering profession. Other professions that could make use of the Act include accountants, actuaries, doctors, agrologists, architects, chemists, dieticians, foresters, lawyers, mathematicians, meteorologists, occupational therapists, pharmacists, physicists, physiotherapists, psychologists, social workers, special librarians, town planners, and university teachers. This impressive list was provided by the Steering Committee on Negotiation Rights for Professional Staffs (an Ontario group under the chairmanship of Edward G. Phillips) as example of the kinds of professionals that a proposed Professional Negotiations Act has attracted informal support from. The list was compiled as the result of information gained from the circulation of a brief by the Committee to groups in other professions.

The idea of seeking special legislation for a particular occupational group, or similar occupational groups, is not a new one. In Alberta, teachers have for many years enjoyed collective bargaining privileges under the Alberta Teachers Act. Similarly, teachers in British Columbia are authorized to bargain under the Public Schools Act, and in Ontario all teachers are required to belong to the Ontario Teacher's Federation (under the Teaching Profession Act of 1944) as a condition of teaching in Ontario. Under these statutes the profession enjoys extremely effective collective bargaining.

Other professions now feel that special legislation may be the answer to many of their problems. Examples of this are doctors in Quebec who are organized under the Professional Syndicates Act, nurses in Alberta who are seeking a means of solving their particular dilemma, and nurses in Ontario who are almost unanimously in favour of special legislation that would grant nurses collective bargaining rights with optional arbitration as a means of resolving an impasse.

Groups of engineers in Quebec and Ontario provide the best example of members of the profession that feel the enactment of special legislation is the best means of providing for effective wage determination. Several groups in Quebec have organized under the newly enacted Professional Syndicates Act, while the group in Ontario favour organization under the

proposed Professional Negotiations Act. These two acts, while striving for the same ends, differ in the procedures that are advocated to attain these ends.

The most striking difference between the two acts is the manner in which an impasse is resolved. Under the Quebec legislation the engineers may legally strike. However, under the proposed Ontario legislation binding arbitration is the final step in the bargaining process. A brief summary of the results of negotiations between the City of Montreal and the Syndicat Professionel des Ingenieurs de la Ville de Montreal will serve to illustrate the extremely favourable agreement that resulted from this organizational alternative. This was the first agreement of its kind to be negotiated in Canada. It is reported below.

On May 26, 1965, an agreement was reached between the City of Montreal and the "Syndicat Professionel des Ingenieurs de la Ville de Montreal". The Syndicate at the City of Montreal was the first syndicate of engineers to be incorporated under the "Professional Syndicates Act" (NOT the Quebec Labour Code) and was the first syndicate of engineers to be recognized by an employer. Although a legal strike had been planned for May 24, it did not take place. The employer and the dyndicate accepted, late on Sunday, May 23, the main recommendations contained in reports prepared by a mediator from the Provincial Department of Labour.

The syndicate obtained substantial increases in salary and fringe benefits. The complete agreement is a 22-page document containing 29 articles and two appendices. Some of the main features of the agreement are as follows:

1. The City recognizes the Syndicate as being the only collective representative of about 90 per cent of the engineers in its employ. Specific positions excluded from the agreement include those of Director of Department, Deputy-Director, Assistant-Director, Superintendent-Engineer, Deputy-Superintendent, and Assistant-Superintendent.

2. The individual salary of all engineers shall be raised as follows:

- (a) Up to Group 7 -
 - beginning May 1, 1964, by \$1,000.00 (retroactive)
 - beginning May 1, 1965, by \$420.00
 - beginning May 1, 1966, by 6.9%
 - beginning April 30, 1967, by 6.5%
- (b) Group 7 -
 - beginning May 1, 1964, by \$1,000.00 (retroactive)
 - beginning May 1, 1965, by \$420.00
 - beginning May 1, 1966, by \$755.00
 - beginning April 30, 1967, by \$760.00

3. The new salary scale for the seven grades of engineers covered by the agreement is shown at the end of this summary.

4. An engineer will be entitled to a statutory increase of \$500.00 per year until he has reached the maximum of the salary scale for his function.

5. The City agrees to collect the regular Syndicate dues of the Syndicate members who request such deductions by the City.

6. The regular work week of any engineer will be 33 3/4 hours. Daily hours are from 8:30 a.m. to 4:30 p.m., less one hour and one quarter for lunch.

7. Overtime will be paid at straight time plus a premium of \$1.00 per hour. Straight time is calculated by dividing the employee's annual salary by 1,755 hours. The hourly rate plus the premium of \$1.00 shall in no case exceed \$8.00 per hour.

8. An engineer who is required to come back from his home to do overtime shall be paid by the above mentioned rate for a minimum of three hours.

9. A total of 15 statutory holidays will be recognized as paid holidays each year.

10. Engineers will be entitled to two weeks vacation after one year of service; three weeks after eight years, and four weeks after twenty years.

11. An engineer shall be entitled to 15 working days of sick leave each year. Unused sick leave during a fiscal year shall accumulate and be added to the 15 day period of the following fiscal year.

12. Upon his retirement, resignation, dismissal or death, the engineer or his beneficiaries shall benefit from the balance of "sick leave days" accumulated to his credit and payable at the rate of his final salary.

13. A seniority list for engineers will be established. Assuming equal competence, any vacancy the City may decide to fill must be so filled by an engineer who has the highest seniority.

14. A Grievance Committee will be established by the Syndicate. If the Grievance Committee and the Director of Personnel cannot agree on an equitable solution to a grievance, the grievance will be submitted to an arbitrator whose decision will be binding upon both parties.⁵⁸

Included in the above report was a salary schedule for the seven groups of engineers employed by the City of Montreal. It is printed below.

⁵⁸ "Montreal Engineers Sign Collective Agreement." The B. C. Professional Engineer. Vol. 20, No. 3, October 1965. pp. 17-18.

CITY OF MONTREAL CONTRACT SALARY SCHEDULE

	<u>Previous</u>	<u>May 1, 1964</u>	<u>May 1, 1965</u>	<u>May 1, 1966</u>	<u>April 30, 1967</u>
Group 1 - Junior Engineer					
1st Year	\$ 5,500	\$ 6,500	\$ 6,500	\$ 6,800	\$ 7,300
2nd Year	6,000	7,000	7,000	7,300	7,800
Group 2 - Engineer					
3rd Year	6,500	7,500	8,000	8,000	8,500
Max.	9,500	10,505	10,925	11,680	12,440
Group 3 - Assistant Section Head					
Min.	8,900	9,900	10,296	11,006	11,722
Max.	10,100	11,100	11,544	12,340	13,142
Group 4 - Section Head					
Min.	9,500	10,500	10,920	11,673	12,431
Max.	10,800	11,800	12,272	13,118	13,970
Group 5 - Technical Consultant (Specialist)					
Min.	10,700	11,700	12,168	13,007	13,852
Max.	12,300	13,200	13,728	14,675	15,629
Group 6 - Department Head					
Min.	11,400	12,400	12,896	13,786	14,682
Max.	13,600	14,000	14,560	15,564	16,575
Group 7 - Project Engineer (Subway Construction)					
Min.	12,100	13,100	13,520	14,275	15,035
Max.	14,000	15,000	15,420	16,175	16,935

The previous report gives a very good idea of what the Quebec engineers expect to achieve through the use of this particular organizational alternative. The agreement includes all members of the profession up to the level of Deputy Director and Deputy Superintendent (about 90 per cent are covered), thus the unity of the professional group is maintained. Salaries, hours of work, and holidays have been emphasized with detailed procedures in each of these areas. Also worth attention is the stress that has been placed on seniority, with a vacancy being filled by the engineer with the highest seniority, assuming equal competence. Needless to say, with the success they have obtained, the Quebec engineers have considerable confidence in this method. Although the agreement is not as long as one would find in the railroad industry or the coal mining industry, it is as long as many agreements that are negotiated by industrial employees and their employers under the existing Labour Acts. Further, its form is similar, with differences largely due to emphasis. It is apparent that this group of engineers have entered into a highly structured relationship with their employer, and one that will undoubtedly become more structured as the years pass.

The Ontario engineers, while following a similar approach, look for slightly different bargaining relationships. The legislation they have proposed makes it clear that they do not want to be related to the trade union movement, and goes to length to examine this distinction. The tone

of the act suggests that professional responsibility is high on their list of priorities. This is most evident in their rejection of the strike as the device to resolve an impasse. The following summary of the aims of the proposed act will serve to illustrate the intentions of this group of engineers:

1. Define the employees who are eligible to join a professional staff group.
2. Prevent professional staff groups from affiliating with organizations of employers or trade unions.
3. State that a representative organization which is supported by a majority of the professionals on the staff of the type or types requesting recognition, having a common employer, has the right to act on behalf of the members of the organization and to be the sole representative body for such employees of the company or institution. All votes will be conducted by secret ballot. Jurisdictional problems will be settled through a government-appointed board.
4. Specify what actions are required of an employer in recognition of a representative organization of professionals.
5. Specify a secret ballot for determining, if necessary, that a majority of those coming within the meaning of the term "professional staff" support a particular representative organization.
6. Agreements reached between the group and the employer shall be applicable to all members of the group.
7. Professionals who are not members of the group will not be bound by agreements made by the group.
8. Each member shall sign an individual contract with the employer outlining acceptance of the group agreements and adding any specific points applicable

to the individual which by agreement have been assigned to the individual to settle, or which have not been covered by the agreements of the group.

9. Provide for selection of a mediator, either by agreement of both parties or by appointment of the board, who will act in cases where the employer and professional staff group have not been able to reach agreement.
10. Provide that if the mediator has been unable to bring about agreement within a specific period, then either party has the right to refer the differences to arbitration. The results of such arbitration will be binding on both the employer and the members of the group. Strikes by, or lock-outs of, members of such groups shall be precluded.
11. Protect the right of a professional to join or not join a negotiating group.
12. Prohibit discriminatory treatment of a professional for promotion, support, or non-support of a professional staff group.

While it is evident that the Quebec and Ontario groups advocate different means for attaining their common ends, there are many similarities in the two approaches. Both groups want to be segregated from the trade union movement. They both desire recognition as bargaining representatives, and the establishment of procedures wherein their representation will be effective. Both groups also feel that they can promote more suitable

⁵⁹Phillips, E. G., Chairman. Negotiation Rights for Professional Staffs. Steering Committee on Negotiation Rights for Professional Staffs: Toronto. April 1965. 7 pp., pp. 3-4.

employee-employer relationships under a special act than they could by working under the existing labour legislation.

In using this approach these groups gain the tenure and contractual obligations that come from legalizing the collective bargaining procedures. The status of the individual engineer is less adversely affected, than it would be if organized under the Labour Act, but more than it would be if a system of fee-scheduling were possible. Further, the unity of the profession would be less endangered under this alternative, than it would be if organized under the labour act, but more than it would be under a system of fee-scheduling. This is because fewer exclusions would be necessary under a special act than would be required under the "management" and "confidential employees" section of the Labour Act.

Thus, we have seen that this organizational alternative, like the previous two, has both its advantages and its disadvantages. Again, the acceptability of this particular alternative may best be appraised on a local basis, because of the inconsistency of attitudes, toward collective action, found in the engineering profession across Canada. This approach may work very well in some situations, yet fail miserably in others.

COLLECTIVE BARGAINING UNDER A REVISED PROFESSIONAL ACT

The fourth organizational alternative is to revise the various professional engineers' acts. These acts are usually entitled either "The Engineering Profession Act" or "The Professional Engineers Act", with each province having its own act. In general, these statutes are designed to give legal recognition to the Association and its Council, to outline the powers that are granted to Council, and to outline various procedures. The latter includes licencing, membership, partnerships and corporations, examinations, registration, suspension and expulsion, and penalties. The responsibilities that the various Councils have in all these areas are spelled out in the acts.

The most pertinent section of the acts, for collective action purposes, are those that deal with the statutory powers and functions of the Council. It is this section that the British Columbia Association would like to have expanded, in order to give their group collective bargaining privileges. The pertinent section of the British Columbia Engineering Profession Act (Section 8) is quoted below.

The Council may from time to time pass, alter, and amend by-laws, not inconsistent with the provisions of this Act, providing for

- (a) the election of the Council;

- (b) the government, discipline, and honour of the members of the Association, including the prescribing of a code of ethics by which such members shall be bound;
- (c) the management and maintenance of the Association and its property, both real and personal, the investment of its funds, banking, the borrowing of money, the appointment of staff and their remuneration, and generally for the carrying-on of the general business of the Association;
- (d) the fixing of an annual fee not in excess of fifty dollars and other fees, including fees on admission;
- (e) the levying, payment, remission, and collecting of annual and other fees;
- (f) the establishment and regulation of standards of admission to membership and the enrollment and qualifications of candidates for admission to membership.
- (g) the classification of the different branches of professional engineering and the designation of the different grades of membership in the Association and limitation of the rights of members within the different branches and grades;
- (h) the subjects of study, the examinations to be passed, the experience in engineering required, and the fees to be paid as a preliminary to or upon application for membership in the Association;
- (i) the resignation and temporary withdrawal of members;
- (j) the calling and conduct of meetings of the Association and of the Council, the necessary quorums, voting, the appointment of committees and their powers, the method of balloting, and other matters in connection therewith;
- (k) the assistance, pecuniary or otherwise, to be given to individuals and organizations where, in the opinion

of Council, such assistance will be of benefit to the public, the Association or its members;

- (l) the promotion of better public relations in such manner and by such means as the Council may see fit, including, without limiting the generality of the foregoing, the publication of books, papers, and periodicals;
- (m) the creation of divisions, committees, and regional groups, and the delegation to them of such powers and authority as the Council may see fit;
- (n) all other purposes reasonably necessary for the management, regulation, and well-being of the Association.⁶⁰

The above statement is typical of the powers and functions given to the Councils under the various Engineers' Acts of Canada. It can be seen that the powers granted to the Council are generally aimed at promoting engineering as a profession. They include the organization and management of a professional body, membership regulation, classification procedures, examination and qualification procedures, and discipline procedures. All of these areas are the legitimate concern of a group that is dedicated to the promotion of their occupational function as a professional endeavour.

However, the addition to the above quoted section, that the British Columbia Association suggests, cannot be thought of as an expansion

⁶⁰ British Columbia Department of Labour. Engineering Profession Act. Vancouver, British Columbia: Queen's Printer. 1960, 14 pp., Sec. 8 (1).

of the existing powers of the Council. It is truly an addition, that is, an entirely new function which the Association wishes to assume. The Council has stated in a memo to their members that they feel they should:

... ask for authority under the Engineering Profession Act to add to Section 8 a power of council:

"To establish an ancillary body to act as collective bargaining agent in labour relations for employee members of the Association."

and to add to the Act a series of sections headed "Collective Bargaining by Employee Members of the Association" which would constitute a labour relations code for employee members.⁶¹

This approach, though it would appear at first glance to be an extremely simple method of implementing collective action, is just as complex as the other approaches discussed above. It is not simply a matter of inserting a clause in the statute and initiating negotiations. On the contrary, it means that the structure and procedures of collective bargaining would also be enunciated, which in turn means that the Association will have to know precisely what type of structure and procedures it wants. In other words, this alternative would have to face the same basic problems that were covered in discussion of other alternatives. However, under this

⁶¹ "Memo to: All Registered Members of the Association." The Association of Professional Engineers of British Columbia. October 8, 1965. p. 2.

alternative the members of the profession would be represented by an ancillary body of their Council, rather than by a body that is separate from their professional association.

This alternative, by virtue of the Council of the Association (or at least an arm of the same) acting as the members' legal representative, could tend to enhance the status and dignity of the individual engineer. Or, at worst it should not detract from the existing status enjoyed by a professional engineer. It should not threaten unity within the profession, provided all members are represented by the Council.

As noted earlier, this alternative is favoured by the members of the British Columbia Council. This is understandable, since it creates a new function under their control, thus enhancing the prestige accorded to Council members. However, it cannot be said with any degree of certainty that the majority of the members of the Association favour the Council, or an ancillary body of it, acting as their representatives.⁶² It is uncertain, in the long-run, whether it will be the members of Council or the members of the Association who will have the dominant voice in the final decision.

⁶²Armstrong, W. M. "Changing Attitudes." The B. C. Professional Engineer. December 1965. pp. 16-18.

UNION OR ASSOCIATION TO HANDLE BARGAINING?

Throughout the above discussions on the four organizational alternatives available to the engineering profession, the reader may have noted that under each alternative there are also alternative representation bodies. Who is to represent the employee-engineers in negotiations with their employers? There are many possibilities. Should engineers be represented by their Council, by an ancillary body of their Council, by an affiliated trade union, or by a completely independent body? Should it be a local body, a regional body, or a national body? The answer is crucial, if the profession wants effective collective action, and to a great extent will depend upon the organizational alternative chosen.

If the engineering profession decides that greater membership control by their professional Association is the answer, the Association will be responsible for handling collective bargaining. However, in each of the other three alternatives the answer is much more complex. In each case the profession will have to assess the advantages and disadvantages that the various representative bodies present. It is not merely a matter of accepting the choice that has all the advantages, for all of the choices have some disadvantages. It becomes, therefore, a real dilemma. None of the representation alternatives available will be equally satisfactory to all members of the profession.

If organization under the existing Labour Act is agreed upon as the most favourable approach, representation by a body that is affiliated to the trade union movement may provide the most economically effective answer. It would give the necessary bargaining power, and the legality, that is essential to meaningful collective bargaining. However, this approach will not be acceptable to engineers who fear the trade union movement and its methods. Thus, the status and dignity of the individual engineer comes into conflict with the economic goals of the profession. These goals, then, must be weighed, one against the other, to arrive at the most useful solution to the problem of representation. It may be that an independent body would have to be chosen in order to fulfill the status requirements of the profession.

If organization under a Special Act is accepted as the best alternative, it would appear to rule out representation by a body affiliated with the trade union movement. This is because, in seeking a Special Act, the profession has rejected the notion that legislation designed for members of the union movement can properly apply to them. This alternative would appear to suggest representation by an ancillary body to Council, or by a completely independent body. The latter choice is the one favoured by

the Steering Committee on Negotiation Rights for Professional Staffs⁶³ and while it may be the best means of maintaining status, it may not result in the most effective representation. Standing alone, it may be that engineers do not possess sufficient power to effectively enforce economic sanctions upon an employer.

The last alternative, revision of the existing Professional Engineering Act, really leaves only one reasonable choice as to the collective bargaining representative--an ancillary body to Council. While other choices are possible, there is little sense in accepting this organizational alternative if an affiliated body or an independent body are to act as the members' bargaining agent. Thus, in accepting this alternative, the members of the profession are really broadening, or adding to, the existing functions of Council, and accepting them as their sole bargaining agent.

Thus, in choosing the organizational alternative, the profession narrows the choice of representation available. This choice must be viewed in the context of the five characteristics important to a program of collective action--legal, effectiveness, unity, status, and dignity. Strong professional

⁶³Phillips, Edward G., Chairman. (Brief presented by the Steering Committee on Negotiation Rights for Professional Staffs in support of Special Legislation entitled Professional Negotiations Act, 1966). April, 1966. 14 pp.

goals may dictate that the Association handle collective bargaining, as this would best satisfy the unity, status, and dignity goals of the profession.

On the other hand, a strong desire for successful bargaining may dictate union representation to satisfy the legal and effectiveness characteristics.

However, the profession may want to take a more "middle of the road" approach in order to maximize their five goals. In this case, it would appear that representation by an independent body, working under a Special Act, would be the best solution.

SUMMARY AND CONCLUSIONS

CHANGING ROLE OF THE PROFESSIONAL ENGINEER

In the early 1900's the majority of professional engineers could be classified as entrepreneurs, with administrative oriented engineers beginning to gain importance. The wage and effort bargain at this time could logically take the form of either fee-scheduling or individual bargaining. However, as more and more engineers could be characterized as employees, the possibility of group salary negotiation became more realistic. Today, with more than ninety per cent of Canadian engineers employed on a salary basis, this possibility is particularly evident.

The reason for this change in working relationships was largely the rationalization of the engineering function in industry. During the Second World War, when there was a tremendous mushrooming of engineering activity, it was found that the engineering function could be divided into specialized tasks. The result of this rationalization was an enormous growth in the size of engineering departments, and in the number of engineers that could be supervised by one man. It brought formal procedures, controls, and techniques into use.

The engineer began to be treated in much the same manner as any other employee, with many of his former unwritten privileges withdrawn,

his scope of work narrowed, individual treatment dwindling, and the fear of unemployment present. These changes led to a feeling of anxiety and uncertainty in the minds of most engineers. With the loss of individual treatment, the reaction of many engineers was that some form of collective action would have to be fostered.

INCREASE IN CONCERN FOR WAGES, HOURS, AND WORKING CONDITIONS

With the concurrent loss of freedom of action, as a result of the rationalization process, engineers found that they became more and more employee-oriented. Discipline by the professional Association became less meaningful than the fear of dismissal. As a consequence, some form of collective action appeared to be the most logical method of protecting members of the profession from arbitrary management actions.

As an employee, the engineer in industry now began to show much more concern for wages, hours, working conditions, and job security. With the new dependence on the employer that the rationalization process fostered, there became a keen awareness that some method of protecting the engineer's well being would have to be found. The employee-engineer, thus became less concerned with professional ideals, and more concerned with methods whereby he could better his economic position.

DESIGN OF A NEW SYSTEM

As individual bargaining became less of a reality the question now was "How to design a system to implement collective action by the engineering profession?" Four alternative methods of organization have been discussed throughout the paper. Engineers could promote better membership control by the Association, work under the existing Labour Act, foster a Special Act, or revise the existing Professional Engineers Acts.

In order to decide upon the correct alternative, the members of the profession must first decide what the prerequisites to a system of collective action are. There would appear to be five prerequisites--legal, effectiveness, unity, status, and dignity. The first prerequisite points to the desire to conduct bargaining within the law. The second prerequisite points to the necessity of the system being successful. There is little sense in creating a new system if it will not be measureably more successful than the one currently prevailing. The third prerequisite points to the need for all members of the profession to participate in a new system. The fourth prerequisite involves the public image of the professional engineer, as a professional. And finally, the fifth prerequisite is concerned with the treatment that is accorded to the engineer by fellow employees, employers, and other professionals.

In deciding upon the best organizational alternative, members of the profession must decide which prerequisites are most important, and which alternative best satisfies these. We have seen, throughout this paper, that while there are many possible solutions to the problems that face the engineering profession, none can be viewed as a universal cure. However, some alternatives are better than others for fulfilling particular requirements of the profession. We can, thus, assess the degree to which the various alternatives satisfy each of the prerequisites. We can do this by reviewing, in outline form, the advantages and disadvantages of each alternative.

Member Control by the Association

Advantages

1. Unity within the profession may be enhanced.
2. Status of the professional engineer may be enhanced.
3. Dignity of the individual engineer may be maintained.

Disadvantages

1. May lack legality.
2. May be economically ineffective.
3. May be impractical.
4. Presents problems of leadership.

Collective Bargaining Under the Labour Act

Advantages

1. May be most effective.
2. Bargaining would be under the law.
3. Support of trade unions would be available.

Disadvantages

1. Professional status would be damaged.
2. Dignity of the individual engineer may be endangered.
3. Unity of the profession would be damaged.
4. May be difficult to withdraw from the Act.

Collective Bargaining Under a Special Act

Advantages

1. Professional status may be maintained.
2. Dignity of the individual engineer may be maintained.
3. Unity may be maintained.
4. Bargaining would come under the law.
5. Could be uniquely designed.

Disadvantages

1. It is uncertain as to whether unity, status, and dignity can be maintained.

2. May not be as effective as bargaining under the Labour Act.

3. The system would be experimental.

Collective Bargaining Under a Revised Professional Act

Advantages

1. Professional status may be maintained.
2. Dignity of the individual engineer may be maintained.
3. Unity may not be damaged.

Disadvantages

1. It is uncertain as to whether unity, status, and dignity will be maintained.
2. May be ineffective.
3. Presents leadership problems.
4. Legislation may be hard to enact.

ALTERNATIVE WHICH BEST SATISFIES PREREQUISITES

The alternative which best satisfies the five prerequisites would appear to be organization under a Special Act. This alternative is neither the most strongly professional oriented, nor is it the most strongly union oriented. Rather, it satisfies each of the prerequisites to some degree.

While organization would limit the likelihood of support being available from unionists, this may not be necessary if there is a "new unionism" emerging. It is unlikely that status and dignity will be damaged by this approach, and unity in the profession may be enhanced. This is because the great majority of professional engineers could be included in the bargaining unit, as a result of the uniqueness of the system.

By bargaining under such an act, engineers may maximize satisfaction of all five prerequisites. With this more "middle of the road" approach none of the prerequisites are completely negated, as they are under other alternatives. The result may be that their ability to gain control over some of the prerequisites will help them to enhance the others.

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Introduction

The purpose of this study is to investigate the effects of various factors on the growth of a certain plant species. The study is divided into two main parts: a theoretical analysis and an experimental investigation.

The theoretical part of the study is based on the work of several authors who have studied the growth of plants under different conditions. The experimental part of the study is based on the work of several authors who have studied the growth of plants under different conditions.

The results of the study show that the growth of the plant is affected by several factors, including the amount of light, the amount of water, and the amount of nutrients. The growth of the plant is also affected by the temperature of the environment.

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